The Bradshaw Lecture

ON THE

SIGNS OF ACUTE PERITONEAL DISEASES.

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MR. PRESIDENT AND GENTLEMEN,—Peritonitis is a word strictly anatomical, and relates to an affection of structure only. The structure affected is known by its ancient Greek name—"peritoneum"; the corresponding English term, "the rim or rim of the belly," has gone out of use, or is remembered by being found in old books, such, for instance, as the writings of those learned anatomists, Robert Burton and Phineas Fletcher, contemporaries of Harvey. The peritoneal structure has functions, no doubt, but they are so unimportant or so obscure that, however much they be disordered or suspended, no signs peculiar to the consequent disease can be discerned. This is the reason why the ancients, whose nosology was founded almost wholly upon symptoms or disordered functions, knew nothing about peritonitis as a disease of the peritoneum—in other words, peritonitis was not recognised before morbid anatomy began to be studied; nay, not until morbid anatomy had been studied for many years. In Morgagni, and even in Matthew Baillie, there is little or nothing about peritonitis—indeed, nothing about it under that name. Nor could anything be more natural than this state of opinion. When the abdomen was laid open, in a fatal case of peritonitis, it was not the peritoneum, but the intestine, the stomach, the omentum, all highly inflamed, that caught the mind's eye of these early anatomists; nor did they inquire which portion of those viscera was inflamed first and foremost. Hence the nosologist, Sauvages, invented the terms "gastritis," "enteritis," "mesenteritis," "metritis," "cystitis," to signify the inflammation of the respective organs as manifested by changes in their outer peritoneal tunic; and, from 1750 to many years onward, these words were much used, and always in the sense indicated. Sauvages invented the term "peritonitis" also, but he meant thereby inflammation of that part alone of the peritoneum which lines the abdominal walls and covers no viscus. No wonder that the word, while this was its meaning, was very seldom employed; no wonder that Cullen, who in his "Nosology," gives a place to peritonitis, excludes it from his *first lines*, saying that the disease, when existing alone, is hardly to be recognised and does not require any special treatment. This state of morbid anatomy, this failure to recognise the unity of peritonitis, faithfully reflected the state of anatomy in general. The peritoneum was known as being the outer tunic of the stomach, intestines and other abdominal viscera, but of the peritoneum as a uniform continuous structure, as a single organ, so to speak, anatomists, before the time of Bichat, had little or no notion. The study of puerperal fever led the way to more modern opinions. That disease had been known for many centuries, but by its symptoms only; one of the best descriptions of it, written from this point of view, is to be found in the works of our distinguished Fellow, Thomas Willis. He, in all likelihood, never examined a case after death, and he therefore deemed the fever to consist wholly of an infection of the blood, not secondary to any local inflammation. It was not until the middle of the last century that it came to be known by many that the abdominal viscera, or rather, their peritoneal surfaces, are inflamed in most cases of puerperal fever; and from this time onward one form at least of universal peritonitis was well known; but not known by the name "peritonitis"—that term had been invented, but was never employed—a fact which is proved by a story which John Hunter used to tell in his lectures. He said: "A man whom I tapped at the hospital died the third day. I said he died of the puerperal fever. This was smiled at in the hospital, and some were pleasant in remarking on the curiosity of a man being delivered; but a few months afterwards, another having the same fate, I convinced them, by dissection, that he had died of suppuration of the peritoneum, which we must admit to happen in peurperal fever." A great change of opinion, and a conversion to the modern conception of the peritoneum, is marked by the publication of Bichat's treatise on membranes in 1800. Henceforth the peritoneum is deemed by all to be not many portions, but a single whole. Discoveries are seldom made at a bound; the sunrise is foretold by the daybreak; and there were those who, before Bichat, had perceived the unity of the peritoneum; I refer especially to James Douglas and Johann Gottlieb Walter. Bichat was more than an anatomist; he was a great morbid anatomist; he had attained to modern doctrine with respect to peritonitis also. But what his early death—a death too early—suffered Bichat not to write was written by his disciple Laennec, whose "Histoires d'Inflammations du Péritoine," published in 1803, were the first essay on peritonitis conceived in the modern spirit. Here I will bring my preliminary history of opinion to an end.

It is not my intention to speak of the morbid anatomy of peritonitis, nor of its causes, a topic which is becoming more and more one of microbes and morbid poisons, for peritonitis also has entered the great class of parasitic, zymotic and virulent diseases. The changes which peritonitis begets in the living body is my theme. I am not so vain as to suppose that I can say anything which will be new to such an audience as this; all that I can pretend to do is to recall to your memories the facts of your own experience and to arrange, criticise and endeavour to explain those facts. *Ament meminisse periti.*

Local signs.—The chief local signs of acute peritonitis are three—pain, meteorism and ileus,—and to these I will, in the first place, direct your attention. But before I proceed I may remark that, with regard to the symptoms, both local and universal, of acute peritonitis, it would be possible to take the term "peritonitis" in the sense of any affection of the peritoneum, which is all that the word signifies, strictly speaking. The termination "itis" is a feminine adjectival suffix which has nothing to do with implying inflammation; peritonitis means no more than peritoneal, disease being understood. The symptoms of sudden inflammation of the peritoneum, of sudden hæmorrhage into the peritoneum and of sudden perforation of the peritoneum are essentially the same. However, I have not the slightest intention of using the word in any but its customary sense, and peritonitis shall mean, as it always has meant, inflammation of the peritoneum.

Pain.—Broussais speaks of pain as being the only pathognomonic sign of peritonitis. I fear it would be nearer the truth to say that there is no pathognomonic sign at all. Yet, however vague and uncertain a sign of disease pain may be, it often is, at the onset of peritonitis, our only guide to the locality of the affection, although an untrustworthy guide. The earlier physicians called the pain of peritonitis, colic; nor is it always easy, even in the present day, to distinguish colic from peritonitis. The symptoms associated with the pain do not always help. In some cases of mere colic (or intestinal pain), say lead colic, the abdomen is very tender to the touch, and the pain is not relieved, but is even increased, by firm pressure. Moreover, colic is sometimes a febrile disease, and for proof of this assertion I may again refer to lead colic; the temperature of some persons suffering from that disease will rise considerably and remain for days above the rule of health. The colic of indigestion is sometimes indistinguishable from an attack of peritonitis, until the threatening symptoms pass away with a free action of the bowels. But the most puzzling disorder of this kind which I have met with is the abdominal pain which sometimes accompanies the menses in young women. Pain, having all the characters of colic, is common enough about the menstrual period and causes no difficulty. Menstruation is not seldom a febrile process, and when this is all, we know with what we have to do. But when abdominal pain and fever are associated, when they precede the appearance of the menses by two or three days, when the patient shivers once or twice, vomits, lies with her knees drawn up, and when her abdomen becomes swollen, how can we at first have any doubt that she is suffering from peritonitis? Yet no sooner do the menses occur than all these symptoms disappear, and then how can we any longer believe that her complaint has been peritonitis? Not only does colic simulate peritonitis, but the reverse also is sometimes true, that peritonitis at the onset cannot always be distinguished from colic. The diagnostic difficulty may be met with, for instance, in peritonitis due to sudden perforation of a hollow viscus, especially the stomach or duodenum. In such

cases it often happens that the temperature of the body does not rise; and for some hours at least the pain has all the characters of colic pain, and there are no other distinctive signs. Still it may be that in contrasting thus the pain of peritonitis with the pain of colic we are seeking for a distinction where there is no real difference. Indeed, it is highly probable that the earlier physicians were often right, and that much of the spontaneous and paroxysmal pain of peritonitis is due to colic—that is to say, to vermicular contractions of the intestines much more powerful than usual. Surgeons tell us that when they open the abdomen in order to remove an ovary the intestines are seen to be at first in very active movement; and that these movements may be painful is proved by what we sometimes observe in intestinal tympanites, when the peristaltic contractions of the bowels can be seen through the abdominal walls, each contraction being attended by an unnatural sensation or by actual pain. Moreover, surgeons say that they can handle, cut and scratch the stomach or intestines of a man who is quite sensible and not cause in him any sensation of pain; but we cannot go so far as to affirm that an inflamed peritoneum may not be extremely sensitive to painful impressions. As to tenderness upon pressure of the abdomen, is it not a mistake to suppose that it is pressure upon the peritoneum alone which brings forth the pain? The skin also is tender, and is sometimes tender to the gentlest touch. In bygone days I have attempted to shave the head of a patient suffering from acute meningitis and have been compelled to desist on account of exquisite tenderness of the scalp. No question of pressure upon the membranes of the brain can arise under such conditions. Indeed, tenderness of the skin is apt to follow great pain of any underlying part. I have already remarked that simple colic may be accompanied by great tenderness on pressure; and I commend the consideration of these facts to those who find a difficulty in believing that leeches or blisters applied to the skin can possibly affect a deeply-seated part with which the skin has no obvious connexion.

Meteorism.—Leaving the topic of pain, I now pass on to the other local signs of peritonitis—namely, meteorism and ileus. The pain is in great part intestinal; meteorism and ileus are wholly such. The pain is in great part due to intestinal spasm; meteorism and ileus are due to intestinal paralysis. The hollow viscera with muscular coats are the only viscera which are directly affected by the peritoneal inflammation, and this affection takes the form of spasm or paralysis. Patients with peritonitis are often unable to pass their urine, whether from paralysis of the bladder or from inability to start the reflex act may be open to question; the latter is probably the more usual 'cause. But about the intestinal paralysis there can be no doubt. It manifests itself in its earlier and slighter degrees by meteorism or acute flatulent distension of the bowels. I do not speak of that peritoneal meteorism which is due to the escape of air into the peritoneal cavity in consequence of rupture of some part of the alimentary canal, but of that intestinal meteorism only which is secondary to peritonitis. Intestinal paralysis is no longer a matter of inference. Abdominal section nowadays often gives surgeons the opportunity of seeing how intestines which, when first exposed, were in active movement afterwards become exhausted and lie limp and motionless. This intestinal paralysis is not continual or not universal, for in patients whose abdominal walls are thin vermicular movements of the intestines, either spontaneous or produced by handling the abdomen, can be seen sometimes in spite of very great meteorism. But this is an exception to the rule. Usually no intestinal movements can be seen, and probably none occur or else they are too weak to show themselves. So we may suppose that the flatulent distension is due partly to relaxation of the intestinal walls and partly to weak peristaltic movement insufficient to pass the flatus onwards, a condition closely resembling constipation. This torpid meteorism, I just remark in passing, may be attended by great and constant pain—a fact which seems to show that the pain of peritonitis is due not altogether to colic or painful intestinal contractions, but partly to the inflamed peritoneum itself. Another proof that the intestines are not so utterly paralysed as might at first seem likely, or that the large intestine at any rate escapes, is afforded by the fact that natural defecation or even diarrhœa will accompany acute peritonitis. This was so in the epidemic disease which bereaved our College of a Fellow whose name no doubt remains in the memory of many here present; I refer to Dr. Francis Anstie. You will allow me briefly to repeat the story, which may not be known to all. Fifty-two girls in the Royal Patriotic School at Wandsworth were attacked within one week by a disease characterised by two main symptoms—namely, by lipothymia, with coldness and lividity of the face and limbs, and by great pain in the abdomen, which was tender also to the lightest touch. Four children died, and dissection of the bodies revealed peritonitis. One fatal case suffered from diarrhœa with rice-water stools, and was examined by Dr. Anstie. He pricked his finger and died six days afterwards, poisoned as if by a snake-bite. A remarkably similar epidemic, which occurred in a charity school for girls at Edinburgh, called the Merchants' Hospital, is described by Abercrombie, Peritonitis by itself would probably always be attended by the constipation of paralysed intestine; and surgeons note great constipation in cases of peritonitis following abdominal section. When diarrhœa concurs modern doctrine would lead us to infer the coexistence of an infection of the intestinal mucous membrane, especially that of the colon.

Ileus.—A higher degree of intestinal paralysis is marked by the state called ileus, a word which has been sufficiently constant in its meaning from the earliest times. It denotes disorder of an intestinal function—namely, of the peristaltic function—and implies inability on the part of the intestine to propel its contents. The kind of ileus which concerns us here is that which is due to inflammation of the intestines, or enteritis. I have already remarked that the term "enteritis" originally meant an inflammation of the peritoneal coat of the bowels. It was Broussais who most unwarrantably perverted the meaning of the word, and who used it to signify an inflammation of the mucous membrane of the intestine—one out of many instances showing the degree to which corruption of our technical terms has been carried. They who continue to use the word "enteritis" in its original sense do no worse than follow the example of Pemberton, Abercrombie, Graves and Watson. For those who desire a name to express inflammation of the intestinal mucous membrane the terms "eso-enteritis," "muco-enteritis," "enteritis mucosa" have been invented. The sign of ileus is vomiting becoming fæcal. The father of physic has well described the course of events, the matters vomited being first mucous, afterwards bilious, and lastly fæcal. Until the vomit became fæcal, or at least porraceous (meaning thereby an appearance like chopped grass or spinach), it is impossible to affirm the existence of ileus. The concurrence of constipation is no help, and indeed, on the other hand, fæcal vomiting may be attended by the evacuation of small loose stools, resembling in colour and other respects the pale, uniform, pasty intestinal contents found in cases of mechanical obstruction. I need not stay to bring proof that stercoral vomit may be due to obstruction in the ileum; and thus the question, formerly so much debated, of possible reflux through the ileo-cæcal valve loses its interest. Nor need I discuss the mechanism of fæcal vomiting, or say more than that there is no evidence of inverted peristaltic movement of the intestines. If enemata ever become emetic, as Sydenham says they do, it can only be by absorption into the circulating blood, just as vomit may smell of turpentine after the use of that drug in a clyster. So that pain and the signs of intestinal paralysis are the only local evidences of acute peritonitis. It were much to be wished that the disease afforded physical signs such as are usually present in chronic peritonitis. Purulent discharge from the navel in acute peritonitis (just as in the chronic disease) indicates a circumscribed peritoneal abscess; in acute peritonitis the abscess is mostly connected with disease of the appendix vermiformis. I do not know that a suppuration of the whole peritoneum ever points at the navel or elsewhere; a form of disease so virulent as this kills the patient before the collection of pus has time to point. We open these local abscesses freely, and with much success; but with regard to total peritoneal suppuration, I will adopt John Hunter's words without change: "How far in such cases it might appear desirable to make an opening into the abdomen and throw in warm water repeatedly to wash away the matter I will not undertake at present to determine."

Fever.—Let us now pass on to consider the remote or universal effects of peritonitis; and first of fever. There is no symptom more uncertain than this, the temperature being sometimes high, and reaching 105° or more, usually but moderately raised; whilst in other cases there may be no fever at all, so far at least as can be judged by a thermometer in the mouth or axilla. This apyrexia is a remarkable symptom when present, as it sometimes is, from first to last in peritonitis the most intense and fatal. We are tempted to speculate upon the cause of so strange a phenomenon.

Whether an ordinary febrific poison be not produced by the inflammation, or whether an extraordinary febrifuge poison be produced, at present we cannot do more than note the fact. Apyrexia sometimes becomes algidity—an important sign of the lipothymial state to which I shall soon refer.

Putridity.—More certainly due to an infection of the blood are the putrid or septhæmic symptoms which sometimes happen. When we bear in mind what Bichat pointed out, that the peritoneal cavity is a lymphatic sac with a most extensive absorbing surface and an extraordinary power of absorption, the wonder is that these symptoms do not occur oftener. I will illustrate this form of disease by the case of one of our students at St. Bartholomew's Hospital. He was running along the street and got a heavy fall, which was the only discoverable cause for the acute peritonitis that occurred within forty-eight hours. Delirium and diarrhœa were associated with the abdominal pain and vomiting of the first few days. On the sixth day he complained chiefly of pain in his joints; his feet and one shoulder were swollen and excessively tender. The skin over the feet, wrists and ankles was red in patches. His urine was highly albuminous, but no blood-corpuscles or casts were found in the sediment. The diarrhœa continued; he lay in a state of typhomania—that is, of delirium with consciousness much impaired. He had a greater tendency to chills and occasional shivering than is usually met with in cases of peritonitis; the temperature varied between 102° and 105°, until a few hours before death, which occurred on the eighth day. At the post-mortem examination nothing was found but peritonitis and its results; its cause was not found.

Lipothymia.—I will next speak of that marked failure of the vital functions (that is to say, of the circulation, respiration and body heat) which very often accompanies peritonitis. It is a matter for surprise and regret that we have no term in common use to express this set of symptoms. No English word being precise enough, I suggest that we resuscitate the Greek word "lipothymia" to denote *defectio animæ*, this failure of the vital constitution, whether it be attended or not by lipopsychia, *defectio animi*, or failure of the animal constitution marked by coma, delirium, or both. Sudden lipothymia is syncope or swooning; syncope due to injury is shock. Lipothymia is manifested by a small, weak and sometimes irregular pulse, by weakness of the heart sounds, by shallow breathing, by lividity with pallor (deathly paleness), and by algidity or failure of the body heat—at least so far as the skin is concerned; the inner heat, as measured in the rectum, may or may not fall to a proportionate degree. In peritonitis (apart from perforation) lipothymia sometimes marks the whole course of the disease (witness the Wandsworth epidemic, to which I referred a short time since); and when to lividity, coldness of skin and a weak small pulse are added diarrhœa, with watery stools and suppression of urine, the resemblance to cholera is great indeed. But more frequently lipothymia occurs only towards the end of life, and then it may assume, so far as the body heat is concerned, the form of lipyria (another ancient word which might be revived with advantage)—that is to say, while the skin, especially of the limbs, is quite cold, the temperature of the inward parts, as measured by a thermometer in the rectum, is much above the normal; it may be 105°—a very bad prognostic sign in all acute diseases, and a plain proof of the extreme weakness of the circulation. Another sign which sometimes attends this final lipothymia—this mortal agony or struggle with death—a sign which has attracted the notice of physicians from the earliest times—is the disappearance of pain and suffering whilst the patient remains perfectly conscious; yet all the symptoms of vital failure persist, and he only whose attention is fixed upon the local signs to the neglect of the prognostic condition of the whole patient can be surprised by what will seem to be a sudden and unexpected death. It were curious to inquire into the causes of this cessation of pain, whether it be due to cessation of cramp, whether an anodyne poison be produced in the course of the disease, whether the lipothymia arrests the nutrition of the nerve endings, or whether the sensorium for pain be similarly affected; but I will say no more than to remind you, Sir, that an honourable predecessor of yours in that honourable chair—Sir Henry Halford—once read before the College an essay dealing with this very topic. Still more remarkable, although much less common, is the case of peritonitis attacking a healthy person, lipothymia supervening in the course of a few hours from the beginning, and any local signs of abdominal disease disappearing at the same time. The patient when first seen makes little or no complaint of the abdomen; it is not swollen and can be pressed deeply without causing pain; but the skin is cold, the heart beats very frequently, no pulse can be felt at the wrist, the respirations are very frequent, and the secretion of urine is suppressed. The mind is affected little or much. The patient dies on the first or second day of illness. At the post-mortem examination acute peritonitis is found, but not necessarily perforation of the peritoneum or disease of any other abdominal structure.

Facies.—The last sign of acute peritonitis which I shall notice is that afforded by the look and expression of the face. These signs and such as those which constitute the prognostics so much trusted by the earlier physicians can be learnt in no other way than by a long familiarity with disease. If I allude to the countenance which still goes by the name of "facies Hippocratica," it is only to remark that Laennec has endeavoured to walk in the footsteps of his great predecessor and to depict an expression of face often seen in peritonitis and other severe abdominal diseases. This peculiar look, which he calls "face grippée," is due chiefly, if not wholly, to the features being drawn upwards, so that the forehead is more or less wrinkled, and the naso-labial furrows are drawn inwards and upwards towards the root of the nose and inner canthi of the eyes. I have compared Laennec's verbal picture with the living patient, and have found it to be true to nature—but not universally true, not present in every case of acute peritonitis. Indeed, I think that the *face grippée* denotes abdominal pain, and that it usually disappears with the pain, although the disease continues. But we must admit that the local suffering and signs of disease may be very small, and yet the onset of peritonitis be denoted by a profound change in the expression of the patient's features. Surgeons remark this change when an operation is followed by peritonitis; physicians, also, when a perforation occurs in the course of typhoid fever.

Latent peritonitis.—Now a few words concerning latent peritonitis. I have already spoken of peritonitis which is latent in respect of its local signs only; peritonitis in which universal signs of disease—those, namely, of alarming lipothymia—predominate to the exclusion of abdominal symptoms, the patient being killed in a day or two as if by the operation of a powerful venom. But peritonitis may be altogether latent, and manifested neither by local nor by universal symptoms—a form which is deuteropathic, intercurrent in the course of other serious disease, such as ascites, renal dropsy, empyema, pyæmia, or typhoid fever, the peritoneal inflammation being revealed by the post-mortem examination only. What surprise we may feel at this latency diminishes when we reflect that the signs of peritonitis have little or no relation to the peritoneum, but depend upon disorder of other viscera, adjacent or remote. Suppose the onset to be marked by vomiting, what is there distinctive in this? In what disease does vomiting not occur? Is not the stomach the great sympathiser with distress in any part of the body? Add some pain in the abdomen, and how does this help us? Possessing no direct physical signs of peritonitis, and being compelled to rely upon indirect disturbance of the functions of other viscera (for the peritoneum itself has no manifest functions), we cannot expect to discover the presence of peritonitis in cases such as these.

Types.—After analysing the symptoms of peritonitis I might endeavour to arrange them so as to form concrete pictures of patients suffering from that disease; but I will say no more than this, that according as one or other symptom prevails, so does the appearance of cases of peritonitis differ, and the differences are so great that we have to admit divers forms or types of the disease. We cannot manage with fewer types than three—namely, peritonitis characterised by pain, or by ileus, or by lipothymia; for peritonitis discovered only after death cannot be admitted to be a form of disease as looked at from my present point of view. A given case of peritonitis is by no means necessarily constant to one type throughout; for instance, painful peritonitis may pass into ileus, and, moreover, the local and universal symptoms may be variously mixed. But the only reason I have for referring to facts so obvious is to be assisted by these types in comparing the signs of acute peritonitis with the signs of other peritoneal affections, which I will now proceed to do.

Chronic peritonitis.—Peritonitis, which is esssentially chronic in its course, sometimes sets in suddenly, and thus resembles at first the acute disease. This is often observed in the commonest kind of chronic peritonitis, the tuberculous, when, as I suppose, a sudden infection of the peritoneum takes place. The forms assumed by this acute onset of tuber-

culous peritonitis are the same as those I have just discussed. That most often met with begins with pain, vomiting and sometimes diarrhœa, and is followed in a few days by meteorism, which may become very great. Lipothymia in a high degree may attend the choleric symptoms. The least common type, which assumes the form of ileus, deserves especial notice on account of its close resemblance to mechanical obstruction of the bowels—a resemblance so close that abdominal section has been performed in such a case under the notion that the patient was suffering from a strangulated hernia.

Hæmorrhage into the peritoneal sac is another form of peritoneal disease in which we meet with these same types. The painful form is well illustrated by the case of "a woman, aged twenty-nine, who was brought to the hospital in a most alarming condition, although her illness had not lasted longer than a few hours. She had been suddenly attacked by great pain in the lower part of the abdomen, and the pain had steadily increased. She had the *face grippée* and was deadly wan, her breathing was short and frequent, interrupted by hiccough, her pulse hurried and very weak, her abdomen distended and tender. She died within forty-eight hours from the beginning. At the post-mortem examination there were found in the peritoneal cavity nearly three pints of liquid blood which had come from one of the Fallopian tubes; no peritonitis." How peritoneal hæmorrhage may be attended by ileus is shown by the case of a man, aged twenty-two, who was admitted into St. Bartholomew's Hospital in an extreme state of shock following a fall off the tailboard of a van in motion. He complained of great pain at the pit of the stomach, and soon after the injury he began to vomit incessantly. On the second day the vomiting continued to be very frequent. He had a great desire to defecate but passed nothing; his abdomen was very hard and tender; the urine was suppressed; his temperature was 99·6°. On the third day he was worse. Abdominal section was performed. The peritoneum was found to be full of dark liquid blood; nothing more was discovered. On the fourth day he died; the blood came from a rent liver.

Perforation of the peritoneum.—A much more common acute affection of the peritoneum is that which I mention in the last place—namely, perforation or rupture of the wall of a canal or cavity or hollow viscus, and escape of its irritant contents into the peritoneal sac. When we seek to classify cases of this kind we come upon the three or four types of which I have already so often spoken—the type characterised by pain, or by ileus, or by shock, and the latent type. But before depicting them let us ask whether peritoneal perforation yields any peculiar physical signs? None, unless peritoneal tympanites ensue; and this depends, of course, upon the perforated cavity, whether it contain air or not. In the case of peritoneal tympanites, physical examination usually affords more or less probability of the presence of air in the peritoneal sac, but seldom an absolute certainty. The distension of the abdomen is often very great, and greater in perforation of the intestine than of the stomach; when the distension is very great, the skin is tense and shining to a degree seldom seen in intestinal tympanites. Visible coils of intestine or vermicular movements are decisive evidence of intestinal tympanites. Absence of the liver dulness to percussion is a useful, but not altogether trustworthy, sign of peritoneal tympanites; for when the intestines are extremely distended with air they may come to lie between the liver and abdominal wall in front, and I have known this to happen even when the liver was enlarged to twice its natural size. On the other hand, adhesion of the liver's convex surface will obviously prevent the disappearance of its percussion dulness, even though the peritoneal cavity be full of air. The signs afforded by auscultation are less important, because they are common to all great accumulations of air within the abdomen, whether contained in the stomach or intestines, or free in the peritoneal cavity. The chief sign is the bell sound discovered by Laennec. In his "Auscultation Médiate" he says that by percussing lightly, and at the same time applying the stethoscope near by, we shall hear a silvery resonance—clearer, he thinks, in peritoneal than in intestinal tympanites. I cannot do more than just mention the other auscultatory signs of a large air-containing cavity, and which are sometimes present in peritoneal tympanites—namely, an amphoric quality in the respiratory sounds heard over the abdomen, metallic tinkle, and succussion splash. A valuable sign is yielded sometimes by an escape of air into the cellular membrane of the abdominal walls; this fact, also, is alluded to by Laennec ("a sort of dry crackling is felt upon pressure," he says), and is, taken together with the signs aforesaid, peculiar to peritoneal tympanites as contrasted with the intestinal; or the subcutaneous emphysema may be still more extensive. To conclude this topic of physical signs, I will remark that, although their presence is a great help to diagnosis, their absence proves nothing. Perforation of a part of the alimentary canal (for instance, the appendix vermiformis) may occur, may be followedby acutest peritonitis, and yet may be unaccompanied by peritoneal tympanites; nothing escapes from the rupture but offensive and poisonous pus.

With respect to the symptoms of peritoneal perforation, all cases may be referred to the four types so often spoken of—those characterised by pain, or by ileus, or by shock, and those not characterised at all, the disease being latent—latent, that is to say, so far as concerns the diagnosis. First of perforation characterised chiefly by pain. A lady had ailed for some time from pain in the stomach and the side, but she seemed to be otherwise in good health. One day after dinner she complained several times of pain; she drank some succory water as a stomachic, and, putting the cup down with one hand, with the other she pressed her side, and said in a voice which betokened much suffering: "Ha! what a stitch in the side; what pain; I cannot bear it." Speaking these words she flushed, and a moment afterwards turned pale, with a wan lividity which astonished everybody. She kept crying out and begged to be carried away, for she could no longer hold up. Supported by the arms of others, she managed to walk, but with difficulty and bent double. Put to bed, she cried out more than ever that the pain at the pit of the stomach was past belief; she tossed from side to side. A physician was fetched, who pronounced her complaint to be colic and prescribed suitable remedies; but the pain continued; she said that her suffering was greater than could be conceived, and that she would die. All this occurred in less than half an hour. Whatever she swallowed made her retch; she brought up only a little mucus mixed with food. The efforts to vomit and the excessive pain threw her into a state of exhaustion which resembled repose; but she told the bystanders not to deceive themselves, that the pain was as great as ever, and that she had no strength left to cry out. She heard someone remark that she was easier, and she said; "That is so far from being true, that were I not a Christian I would kill myself, so great are my sufferings. It is wrong to wish evil to any," she added, "yet I would that somebody could feel for a moment what I feel, so as to know what my pain is like." Her pulse became imperceptible (*retiré*), her limbs cold. Her friends anxiously asked if nothing more could be done; they suggested a score of remedies, and at last her physicians, in sheer desperation, made an attempt to bleed her, but the blood would not flow. They gave her some broth, for she had taken no food since dinner. She no sooner swallowed it than her sufferings (if not her pain) increased; she complained that her stomach was filling up. Death was painted on her face; the last struggle was short, and after two or three convulsive movements about her mouth she died nine hours from the beginning of her illness. Would you not suppose that I have set before you a living picture in words, taken from the pages of a modern Aretæus or of Sir Thomas Watson? or have you already recognised that I have been reading an account of the last hours of King Charles I.'s daughter, Henrietta, Duchess of Orleans—an account written by one of her ladies in waiting, Madame De La Fayette, 150 years before ulcer of the stomach was discovered, so we may say, by Cruveilhier? That the patient died from perforation of such an ulcer was proved by examination post mortem, although her physicians did not understand what they saw, and it was left for Littré to explain the real nature of her illness. I have always thought that reports of the kind just read, drawn up at the bedside by persons of keen intelligence, but with no medical knowledge, are of great value. Such reports are true to Nature, for the reporters have no preconceived notions to discolour and distort the appearances of things. Moreover, these observers see the sufferer and nothing else; but we physicians, on the other hand, in our eagerness to discover abstract signs of disease and to arrange them into that wholly artificial notion which we call the diagnosis, are apt to overlook the patient. The physicians of Madame said that she was suffering from colic, and that a wretched pulse and cold limbs such as hers were common in that disease. I likewise have stood by a patient writhing under the throes consequent upon perforation of the stomach or duodenum, and have asked myself whether there was anything either in the pain or its con-

comitants which might not occur in intestinal colic, and have been compelled to admit that there was nothing. This difficulty in diagnosis is not to be wondered at if the pain be, as is very likely, in great part due to cramp or painful spasm of the intestines and stomach and perhaps of the abdominal walls also. Yet our diagnosis may reach a high degree of probability under such conditions as these. The ruptured organ being more often either stomach or duodenum than any other, there may have been some forewarning symptoms of ulcer of one of those parts, the perforation occurring suddenly, so does the pain, and especially after a full meal or an effort or both. The very acid contents of the stomach poured into the peritoneal cavity are excessively irritant and the pain is violent in proportion, being far beyond the pain whereof the sufferer has had any experience or conception. The abdominal walls are contracted, tight, and hard, and often very tender. The pain will continue without remission to the end, or will cease altogether, or will only diminish—as I said when speaking of acute peritonitis. The associated symptoms may or may not assist the diagnosis. Vomiting—often present—is sometimes absent. Some have thought that it is absent in perforation of the stomach especially, but the exceptions to this rule, if it be a rule, are many and of both kinds—namely, rupture of the stomach attended by vomiting and rupture of a part not stomach, yet unattended by vomiting. Peritoneal tympanites will ensue if gas escape into the abdominal cavity; but gas does not always escape, even when some part of the alimentary canal is ruptured. Shock attends the rupture, and usually the lipothymia persists to the end. When perforation occurs in the course of a febrile disease defervescence is often a marked sign of shock. Suppression of the secretion of urine is common, and seems to be sufficiently explained by the vomiting and the lipothymia, and their necessary consequences—defective absorption and secretion.

The second kind of perforation—that characterised by ileus—is less common, and occurs especially in disease of the appendix vermiformis. The discharge of virulent offensive matter into the peritoneal sac seems to stun the intestines; they neither feel nor move. A woman aged twenty-two was admitted into St. Bartholomew's Hospital on March 8th. She had taken, on the 5th, jalap and castor-oil to relieve her habitual constipation. The bowels acted soon afterwards three times. Otherwise she was, so she and her friends averred, in perfect health and quite free from pain or indications of disease in the abdomen or elsewhere. Her menses, due on the 5th, did not appear. On the 6th vomiting began, and it continued at intervals up to the time of admission. The bowels had not acted. She was admitted on the evening of the 8th, and one of my surgical colleagues, who happened to be at the hospital at the time, came straight to my house and told me that a woman with obstruction of the bowels had just been sent in to be under my care, and he thought that the question of operation arose. We obtained the assistance of another surgeon and went to see her. We found a woman with no look of suffering, with a warm skin, a temperature of 99·2° in the armpit, and with no symptoms of failure of the vital functions unless indicated by a pulse of 144, which was, however, by no means weak or small. The abdomen was fat and moderately distended, the muscles were tight, but there was no tenderness excepting about the right loin; the right iliac fossa was carefully examined, but nothing could be felt. Examinations *per vaginam*, *per anum*, and for hernia detected nothing wrong. An enema had brought away fæces. She vomited dark green liquid without smell. The urine was scanty; it contained a trace of albumen, was turbid with scaly epithelium and highly granular cylinders like renal tube casts, but there were no exudation corpuscles. The abdomen was opened; thin purulent liquid escaped, the small intestines were distended and purplish brown in colour. Examining the appendix vermiformis, we found a sloughy hole at its insertion into the cæcum, the rest of the appendix much dilated, its lining membrane ulcerated and granular throughout, the outer surface covered with lymph. She died two or three hours after the operation. Nowhere was there any anatomical obstruction of the bowels.

Between this form of disease and painful febrile peritonitis there are all possible varieties in respect of association of symptoms, the ileus being attended by more or less pain, tenderness, and fever. Peritoneal tympanites is often absent, any distension of the abdomen being due to acutest peritonitis, to intestinal tympanites, and inflammatory liquid effusion.

The third kind of perforation is characterised by shock. In some cases, particularly in rupture of the stomach or duodenum, the shock kills within a few hours, and may be justly compared to the effect of a blow upon the pit of the stomach, though why the shock of abdominal injury should be so especially profound I will not undertake to explain. In other cases the patient lives a day or two, yet never rallies. A man, forty years of age, who was under treatment for a chronic ulcer of the stomach, became suddenly, at eight o'clock one morning, pale, pulseless, and delirious (lipopsychia); he had evidently undergone a great shock. Throughout the day he continued to be delirious; consciousness never fully returned. Considerable reaction took place; his skin became hot, his pulse full and frequent; he retched a little, but did not vomit. The same night he became comatose, and so died at eight o'clock next morning. I regret being unable to say whether the urine was suppressed or not. On examining the body the ulcer was found to involve the pylorus and to have perforated on the duodenal side thereof. The contents of the stomach were in the peritoneal cavity, but there were no signs of peritonitis, neither excessive vascularity nor exudation of lymph. This kind of perforation closely resembles other abdominal diseases in which lipothymia predominates. You, Sir, have remarked how perforation of the duodenum will simulate Asiatic cholera in its algid stage; the physicians who attended the Duchess of Orleans came finally to the opinion that she died of cholera morbus; and Dr. Wm. Sedgwick has discussed this topic very fully with especial reference to the suppression of urine.

Lastly, the perforation may be latent; that is to say, unattended by any symptoms adequate to the diagnosis. Not that symptoms are utterly wanting; this is seldom the case; there are more or fewer of those so often mentioned—pain, vomiting, lipothymia and the rest—but they are rendered obscure by occurring in the course of a disease marked by no less serious disorders. The contrast between a person when in good health and when suffering from perforation of the peritoneum is great indeed; but when a patient has been exhausted by four or five weeks of severe typhoid fever, the occurrence of perforation may be a comparative trifle so far as symptoms are concerned; a little pain in the abdomen, a little vomiting, attracts no attention. Or there may be no pain, no tenderness, no vomiting; nothing but a sudden defervescence. Or, again, a change in the patient's look is sometimes the chief sign. During a state of typhomania, in particular, the gravest intercurrent lesions often happen unsuspected. But perforation, latent so far as symptoms are concerned, will sometimes yield one or more of the physical signs of peritoneal tympanites. For instance, in the later stage of typhoid fever, a rapid and great distension of the abdomen, such as to stretch the skin and make it shine and attended by disappearance of the liver dulness to percussion, is a tolerably trustworthy token of intestinal perforation, and is sometimes the only token. The liver dulness may disappear before the abdomen becomes distended.

Incision for the purpose of diagnosis.—To conclude by referring once more to puncture of the peritoneum as a means for ascertaining the presence of inflammatory effusion. A small incision would seem to be justified by conditions such as these: First, the patient is suffering from acute peritonitis, and the indications of poisonous infection of the blood are becoming more and more marked; or, next, there are reasons for believing that perforation of the peritoneum has occurred. In either case, unless we can bring relief, the patient must die. A small incision will not make him worse; nay, to drain the peritoneal cavity affords a chance of recovery; the only objection lies in the natural dislike to an operation, however small.

I wish I could believe that chloroform sleep did no harm, but I fear that this drug has a depressing effect upon persons suffering from acute peritonitis. However, suppose a small incision made, and we find that the peritoneum contains pus or air, beyond simple drainage two further courses lie open to us; we may follow John Hunter's suggestion, and wash the abdomen out with warm water, a proceeding more serious than simple drainage, or we may enlarge the incision and search for the cause of the peritonitis, a proceeding highly dangerous, for you will, I think, agree with me when I say that operations of this kind have seldom any other effect than to hasten the patient's end. A simple puncture, if it does not save the patient's life, will at least bring the satisfaction of knowing that the nature of the disease has not been misunderstood

THE ETHICS OF OPIUM AND ALCOHOL.

THE ANTI-OPIUM CIRCULAR TO THE MEDICAL PROFESSION OF GREAT BRITAIN AND IRELAND.

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"The falsehood of extremes."—TENNYSON.

THE Anti-opium Circular was issued in 1891, and a copy of it was sent to me. After careful perusal it appeared to me to be so inaccurate, sensational, and undeserving of serious notice from a professional standpoint that I put it aside. I subsequently had to notice it, and denounced it as a most "mendacious production." I have, in consequence, been requested to state on what grounds I based my charge, and this I shall now proceed to do, another copy of the paper having been courteously sent to me by one of the signatories, together with a list of the signatures to the circular.

The document commences by stating that "two things are sought: one that the Government of India should cease to foster the cultivation and sale of such a drug as opium for mere purposes of revenue; the other that the drug should be dealt with throughout India by classing it among the poisons and having it sold as such." These recommendations were formulated in four propositions, on which the medical profession was requested to express an authoritative opinion. Each of these I shall consider separately, before I conclude my reply to the challenge.

The above conditions conclusively render it an Indian and medical question; hence I shall treat it strictly as such, all collateral conditions notwithstanding. Indian questions, particularly those which refer to the actions of its Government and their influence upon the vast populations ruled by it, necessitate personal knowledge and experience only to be acquired by residence in India. Yet I find, in examining the signatures to the paper, that three out of the four gentlemen who signed it acquired their knowledge and experience of the drug in China as medical missionaries, and one only was a direct representative of India. It is needless to say that India and China have nothing in common as to their governments, ethnology, manners and customs, and all the collateral conditions which enter into the lives of the vast populations inhabiting them. There is no comparison possible between conditions so absolutely different. The gentlemen from China having signed and put forth a statement based upon an entire lack of personal acquaintance on their parts with the question as respects India in its fiscal, physiological and social relations, their opinions are not, in my opinion, entitled to be treated as authoritative in the determination of the views they advocate. I have searched in vain through the list of signatures, printed as a declaration of opinion, for a single leading representative of the medical profession in India as a supporter of the views contained in the Circular. It was also, I think, an unfortunate omission not to intimate, in connexion with their signatures, the *locus standi* in the arraignment of the Government of India, of the medical missionaries of China.

The medical profession itself is not, I submit, a fit tribunal to pronounce judgment, even from a professional point of view, on the question as contained in the appeal submitted. Beyond singularly erroneous statements of the evil influences said to be caused in India by the manner of dealing with the opium provided for its subjects, there is not a particle of medical or physiological proof adduced in support of those statements, as I think I shall be able to show. When there is tacked on to the statement of one opium cultivator demoralising a whole village, "being as true of India as of China." I cannot consider it as authoritative until the name and position of a single village so circumstanced are produced. To test the assertion I submitted it to an officer of the opium department who has served in that department for twenty-one years, and who was at home on furlough. He is in charge of the Gya and Tetah district, which is 345 square miles in extent, has 31,000 acres under poppy cultivation, yielding 5000 maunds of opium, and employs a body of 130,000 cultivators. During the whole of his service he has not seen a single opium drunkard either at the time of weighment, or in the district, and asserts positively that crime connected with opium is unknown among them, and that the most orderly villages in the district are those occupied by the opium cultivators or in their vicinity. The cultivators themselves are mostly confined to three castes of Hindus who never touch opium; and none of the cultivators can sell any opium surreptitiously to the inhabitants of the villages, for they are too poor to purchase it. The alienation of any portion of the crop would, moreover, be at once detected when the outturn is weighed and paid for. The officer in question has authorised me to make use of his name if I think fit.

Another statement equally open to question is that "the Government of India having already reduced the extent of the cultivation of opium by 100,000 acres, which was done neither at the call of, nor with any remonstrance from its people, but solely in connexion with the fluctuations of its trade with China, there is no question of its power to put down the cultivation over the remaining 400,000 acres now occupied with the poppy, just as easily as it put it down over the 100,000 acres. It is simply a question of revenue." It is to be regretted that any officer who has served in India should so thoroughly misunderstand the real bearings of the question. The Government of India could no doubt, if it were sufficiently ill advised to do so, exercise an overpowering despotism over any social proceeding of its own subjects; but there has never existed in any history with which I am acquainted a more thoroughly conscientious ruling power in dealing with the wants and wishes of those subjects, and in respecting their religious beliefs, habits and customs. In its fiscal and financial proceedings it is guided by other considerations which it would be absurd to discuss upon such grounds as are contained in this polemic. The component parts of the Indian empire have so few interests in common, and the people are so absolutely unacquainted with all combined action for political purposes, as to render the mere mention of the matter a crucial test of the unwisdom of its suggestion.

Now, how far, in what sense, and for what purpose does the Government of India foster the cultivation of opium for the use of its own subjects? Certainly not for the mere purpose of revenue, but to restrict the use of opium as far as may be accomplished by charging the maximum price that can be obtained, without promoting smuggling or contraband in any form. This policy has never been departed from. In support of the anti-opium contention, a single sentence of the evidence of the late Sir Cecil Beadon before the Finance Committee of the House of Commons, has been separated from the general and lengthened examination to which he was subjected. In this manner an entirely erroneous impression is given of his views and of the action of the Government in the restriction of the sale of opium in India. When asked to state whether the use of that drug was injurious to the character of the cultivators, Sir Cecil Beadon said that it was not injurious. He also said that they were as fine and healthy a population as in any part of India; that he had been a great deal among the poppy cultivators of Behar, and considered them a very healthy race, and never saw any of them suffering from the use of opium. He also said that, as far as his knowledge went, opium was not as injurious as alcoholic stimulants. Sir Frederic Halliday, the first Lieutenant-Governor of Bengal, before the same committee of the House of Commons, concurred in the statements of Sir Cecil Beadon on the fiscal and social relations of the opium sold by the Government.

Another confident statement of the counterblast is, if possible, more mischievously inaccurate. It is that "as a result of the facilities afforded by the Government for the opening of opium shops and for the free purchase of opium by all and sundry, the habits of opium smoking and opium eating are very rapidly growing among our Indian fellow subjects, and it need hardly be added that the effects of such indulgence are both moral and physical debasement. Neither can it be denied," continues this erroneous appeal, "that the free sale of opium opens the door in India, as in China, to innumerable acts of suicide, and, still worse, to the widespread inoculation of children with the opium habit from the practice of the mothers using it to narcotise their children while they are at work." Not a single authentic figure or fact in support of the accuracy of any part of this statement has been produced; and, if it can, is it possible to show that whatever increase there may be is in greater proportionate extension than the marvellous increase of the population shown by the late census? Opium smoking is not an Indian vice, and is comparatively little resorted to. That there has been an increase of opium eaters is probable. What proof is there, then, that any widespread moral and physical degradation has been the

result in British India of the opium habit? If such proofs exist, I am unacquainted with them, and have failed to discover them. I have in a former paper shown that among more than 300,000 prisoners in Bengal there was no record of crime due to opium, and no disease attributable directly to the same cause. There was an equal absence of insanity.

Among the Chinese residents in Calcutta, some 600 in number, I never in the many years I lived amongst them saw an emaciated opium drunkard, and the same is true of the up-country colony of Calcutta, now, and probably then more than 1700 in number. The opium agent of Gya, to whom I have referred above, in his twenty-one years' experience has never seen one, among the many thousands of cultivators who came under his personal observation.

And now as to the physiological effects of opium consumption in India. In the scientific investigation of the matter made by Mr. Vincent Richards at Balasore, in the Province of Orissa, which contains approximately a population of 5,720,000 souls, he estimated that 1 in every 12 or 14 of the population uses the drug, and that the habit is increasing. Of the 613 opium eaters examined by him, the average age of commencement of the habit was twenty to twenty-six years for men, and twenty-four to thirty for women. Of this number 142 had practised it from ten to twenty years, 62 from twenty to thirty years, and 38 for more than thirty years. The majority took opium twice daily, from two to forty-six grains, the larger doses the exception, the average being from five to seven grains daily. The dose when large had been increased from the beginning; when small there was no increase at all. The causes of increase were disease, example, and a belief in its aphrodisiac powers. The diseases were chiefly malarious fevers, dysentery, diarrhœa, hæmoptysis, rheumatism and elephantiasis. A number began the practice in the famine year 1866, as it enabled them to exist on less food and mitigated their sufferings. Others used it to enable them to undergo fatigue and to take long journeys. Dr. Richards concluded that the excessive use of opium by the agricultural classes, who were the chief consumers, is very rare indeed in Orissa. Its moderate use may be, and is, indulged in for years without producing any very decided or appreciable effect, except in weakening the reproductive powers, the average number of children of opium eaters being 1·11 after eleven years of married life. This (the opium habit) compares favourably as regards crime and insanity with intoxicating drinks. The inhabitants of Balasore are a particularly law-abiding race, and the insane form only 0·0069 per cent. of the population." Brigade-Surgeon Dymock of Bombay (Western India) concurred in the above view regarding the moderate use of opium, and believed that excessive indulgence was confined to a comparatively small number of the wealthy classes. Sir Wm. Moore, a most competent and reliable observer, had similar experience after long residence in Rajputana. Another of the best authorities on the subject was of opinion that the spread of the habit was in part due to the prohibition among Mahommedans of the use of alcohol, and to some extent to the long religious fasts of Buddhists, Hindus and Mahommedans, in which it is used to allay hunger and to prevent exhaustion. I myself have known Mahommedan patients in my wards, almost *in extremis*, to refuse to take any medicine in which they were told there was alcohol.

Early in the present year a meeting of the Calcutta Medical Society was held, at which the effects of the habitual use of opium on the human constitution were discussed. At this meeting Surgeon-Lieutenant-Colonel Crombie narrated visits which he, with other medical officers and three non-professional gentlemen, had made to several opium dens in that city. The places seen were orderly and well conducted, the chief of them being as quiet as a prayer meeting. The opium eaters were healthy, strong, intelligent men with one or two exceptions; and some of them had been opium eaters for years without showing any signs of degradation and debasement from it. Indeed, they were noted as an unusually bright, intelligent lot, with "broad frames, brawny muscles and healthy, pliant skins." So long as a man had sufficient food, the general impression of the opium eaters was that the opium eating did not do him any harm. The users of opium scouted the idea of opium consumption being as harmful as alcoholic excess. "Look at us," they said; "you find us here, after two or three hours of opium smoking, sitting and talking quietly; if we had been drinking we should have been quarrelling and fighting"; and the gentlemen who visited them agreed with this opinion. Surgeon-Lieutenant-Colonel Crombie smoked an opium pipe, prepared *à la Chinoise*, and it had no effect upon him. In one opium shop only was any sign of unhealthiness seen. In this, which was patronised by a lower order of customers, the opium smoked was a watery extract called Mandat. Of the smokers, two looked decidedly ill, emaciated and cachectic. One of them had smoked Mandat for twenty, and the other for fourteen years. One only showed signs of intoxication, and he was a regular visitor and always went away muddled. One man, of about fifty-four years of age, healthy looking and robust, said he had smoked Mandat for thirty-five years without any harm.

I have not seen the text of the discussion referred to, but if this deeply interesting report contains, as I believe it does, a fair sample of the opium saloons of Calcutta, how can it be reconciled with the contention of the counterblast? Dr. W. J. Simpson accompanied the writer on the last visit to the Mandat shop, and both the visitors were surprised at the readiness and intelligence of the opium smokers, in discussing the question of the evils of the habit. The servant of the shop said he had smoked Mandat for fourteen years, but gave it up six months before, and took to opium eating with benefit.

If the Government of India could see its way to order a general inquiry into the assertion of the widespread evils alleged by the anti-opium agitators to exist at present, unmixed good would be the result, in whatever direction the careful collection of the facts pointed. The late Surgeon-General Edward Balfour of Madras wrote that he had seen many smokers of the extract of opium, and that he had purposely sat among them on prolonged occasions in an opium saloon at Madras, and that he had also seen in India numerous children and grown-up people under the influence of opium without any resulting evil.

The most crucial example of all is, however, the province of Assam, which has been regarded as a reproach to the Government in the matter under consideration. When made over to us by the treaty of Yandabu in 1826, the lower grades of its diminished population, from the cruelty and oppression of its Burmese masters, were in a deplorable physical state, which may in some measure account for the general abuse of opium that then prevailed. To the ill-fed, ill-clothed, half-starved dwellers in conditions of malarious exhalations of the most deadly character, opium would be a source of comfort and consolation which no other means could supply. When, therefore, in due time, the cultivation of the poppy was interdicted, the order was not vigorously carried out from motives of mistaken humanity and from an ill-founded belief that the disuse of opium could not be effected without serious risk to life. A preparation called "Kanee," obtained from an indigenous poppy grown in their gardens, was quietly allowed, and I will give the history of it in the words of the distinguished writer who has kindly given me the information, which is as follows. "When the poppy head has arrived at the proper maturity, incisions are made in it, and a narrow bandage of fine soft cotton-rag is wrapped round the head. When the rag has absorbed all the juice of which it is capable it is unwound, dried, and put by for use. This is kanee, and I believe I may say, with hardly any exaggeration, that every true-born Assamese man, woman and child consumed it, cutting off bits of the rag when they felt a call, and chewing them as sailors do tobacco. The baby got it to suck with its mother's milk, and so it came about that every child was reared on kanee and grew up a kanee eater. After I took charge of the Assam Agency I waged a fierce war against this illicit kanee cultivation, and then when, as a consequence, the demand for the Government opium (which had previously been slack) increased, I increased its price by 'leaps and bounds.' When I left Assam infants were no longer fed on opium, its use by women had much gone out of fashion, and the adult male population could no longer indulge in it *ad libitum*, and had to do honest work to procure the means of indulgence. I need not deny that there was a large increase of opium revenue, *but it was an increase measured by the moral and physical improvement of the people.*"

This graphic and truthful picture places in a very different light the principles under which the Government act to the interpretation of them given in the Anti-opium Circular. Maharaja Narenda Krishna, with whom I was personally acquainted when in India, says that many elderly and old Hindus take opium, and that not a few young men wean themselves from drinking habits by betaking themselves to it. When taken by the camel drivers in the sandy

deserts of Western Rajputana it enables the men to subsist on scanty food and to bear without injury the excessive cold of the desert winter nights, and the scorching rays of the sun. Opium acts in Rajputana as a preventive of malarious fever. The late eminent surgeon, Sir Benjamin Brodie, was of opinion "that the effect of opium when taken into the stomach was not to stimulate, but to soothe the nervous system. It might be otherwise in some instances, but these were rare exceptions to the general rule. The opium eater," he added, "was in a passive state, satisfied with his own dreamy condition while under the influence of the drug. He was useless, but not mischievous. It was quite otherwise with alcoholic liquors." Has an opium eater ever been found to have knocked out his wife's brains? Is that civilised proceeding altogether unknown to the alcoholic drunkard at home?

I cannot better conclude this brief *résumé* of the most reliable views upon the moderate use of opium than with the impartial summing up of one of the best authorities on the question. "So far as can be gathered from the conflicting statements published on the subject, opium smoking may be regarded much in the same light as the use of alcoholic stimulants. To the great majority of smokers who use it moderately it appears to act as a stimulant and to enable them to undergo great fatigue, and to go for a considerable time with little or no food. According to the reports given by authorities on the subject, when the smoker has plenty of work it appears to be no more injurious than smoking tobacco. When carried to excess it becomes an inveterate habit, but this happens chiefly in individuals of weak will power, who would just as easily become the victims of intoxicating drinks and who are practically moral imbeciles, often addicted also to other forms of depravity. The effect in bad cases is to cause loss of appetite, a leaden pallor of the skin and a degree of leanness so excessive as to make its victims appear like living skeletons. All inclination for exertion becomes gradually lost, business is neglected and certain ruin to the smoker results." How is it with the same class of alcoholic drunkards?

(To be concluded.)

TUBAL MOLES AND TUBAL ABORTIONS.[1]

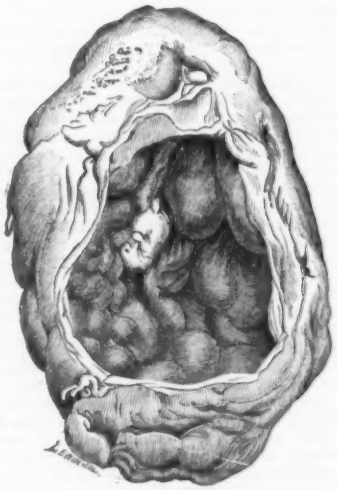
BY J. BLAND SUTTON, F.R.C.S. ENG.,

ASSISTANT SURGEON, MIDDLESEX HOSPITAL.

IN a paper read before the Royal Medical and Chirurgical Society[2] I drew attention to the fact that the ovum in a case of tubal pregnancy is liable, like the ovum in uterine pregnancy, to become converted into a mole (apoplectic ovum). Since that date my observation has been abundantly confirmed in Germany, America and England; indeed, the condition is now so well recognised that it seems almost superfluous for me to again direct attention to it. However, I feel it necessary to do so on account of the many opportunities I have enjoyed of studying the tubal mole since the original paper was published; also it is necessary to correct a few misconceptions.

Tubal moles differ from uterine moles in several particulars—indeed the points of distinction are such as to enable us readily to tell one from the other. The uterine mole is more or less spherical; the amniotic cavity is of fair size and occupies the centre of the mole. The embryo may, or may not, be present. Sometimes it is represented merely by an ill-shaped mass pendulous at the end of the cord. Even when the embryo can be recognised it is very misshapen and the umbilical cord is often œdematous. (Fig. 1.) A tubal mole in its early stage is spherical, but, after attaining the dimensions of a walnut, becomes ovoid. (Fig. 2.) In the majority of cases the amniotic cavity occupies an excentric position; in consequence of this peculiarity the thin amnion is easily ruptured and permits the escape of the embryo. This explains the difficulty of finding the embryo in many cases where the mole has been discharged through a rent in the wall of the tube or aborted through an unclosed ostium, accompanied, as the rule is in these cases, with free hæmorrhage. The mole is easily found in the clot, but if the embryo has escaped from the amniotic cavity the chances are that it will not be recognised. It must not be imagined that because the embryo has not been found it has been dissolved by the peritoneum. On one occasion I collected all the blood and clot which I removed during an operation five weeks after the rupture of a gravid tube and disintegrated it by a gentle stream of water. In the course of this manœuvre the embryo came to the surface, was promptly recognised and caught. As is the case with uterine moles, the embryo sometimes dies very early, and the amniotic sac contains nothing but a small quantity of fluid. When the mole on its escape from the tube is discharged between the layers of the broad ligament it becomes so compressed that the embryo is found flattened out like a succulent flower firmly squeezed between the leaves of a heavy book.

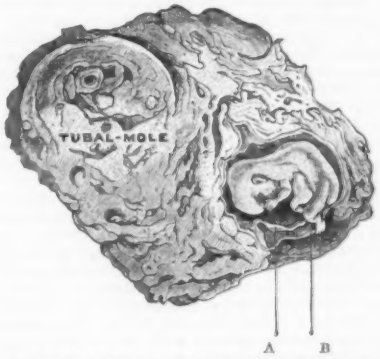
FIG. 1.



A Uterine Mole.

It will be necessary to offer a few remarks on the recognition of a tubal mole. When a mole is found with an embryo in the amniotic cavity there cannot be any room for dispute. The same holds good for moles with an amniotic cavity, though no embryo is present. In hard firm clots in which the amniotic cavity is not recognisable, sections from the supposed mole must be prepared and examined with a microscope for chorionic villi. The presence of chorionic villi are as indicative of a mole as of the presence of an embryo. These villi are such characteristic structures that they cannot be confounded with "half-organised blood," as some writers

FIG. 2.



A Tubal Mole. It shows the excentric position of the amniotic cavity. A, the amniotic cord. B, the amnion. This specimen is in the possession of Dr. W. Walter.

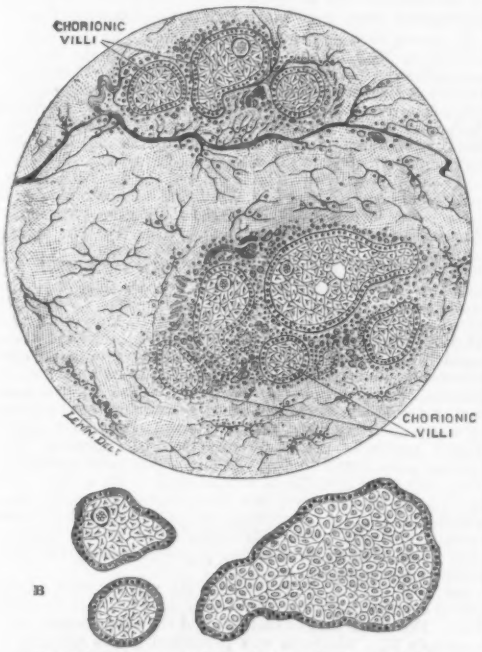
[1] Abstract of a paper read before the Medical Society of London, Nov. 7th, 1892.

[2] Nov. 12th, 1889.

have suggested. The use of such an expression implies ignorance of even the elementary facts of histology. When seen in stained sections among bloodclot the villi are very striking objects, and in order to facilitate their recognition Fig. 3 has been prepared. They usually appear in sections as clusters of circular bodies; ten or more in fortunate sections may be counted together. More frequently they occur in groups of three or four and often a wide section of clot will be examined without finding more than two or three. Under a low power they present an external layer of epithelial-like cells, the central space being occupied by cells of irregular shapes. When examined under a high power the limiting layer is seen to be formed of a perfectly regular row of cubical epithelium; sometimes two rows of epithelium are present.

It is of great importance to appreciate clearly the characters of a tubal mole, for the presence of a mole is decisive proof of pregnancy. It must not be supposed that every bloodclot found in a Fallopian tube is a mole. That blood and bloodclots are occasionally found in the Fallopian tube unconnected with pregnancy is beyond all dispute. Anyone who has

FIG. 3.

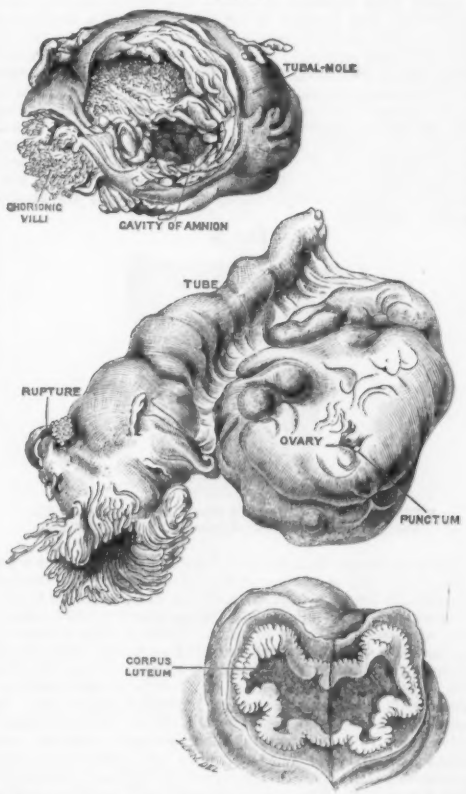


Chorionic Villi from a tubal mole (magnified) embedded in blood clot. B, Villi highly magnified.

taken even the smallest interest in the history of any branch of medicine must be aware that originally many conditions which we now know to be distinct were formerly grouped together under a comprehensive term. It was customary to apply the term "hæmato-salpinx" to accumulations of blood in the Fallopian tube independently of their origin. The discovery of the tubal mole has furnished a criterion for the differentiation of gravid tubes. Formerly the majority of Fallopian tubes containing bloodclot were classed as examples of hæmato-salpinx, and an examination of museum specimens demonstrates this absolutely. For the sake of accuracy in the future it will be necessary to reserve the term "hæmato-salpinx" for a non-gravid Fallopian tube distended with blood secondary to occlusion of the abdominal ostium.

The consideration of the occlusion of the abdominal ostium of the tube brings me to the question of tubal abortion. The retention of an impregnated ovum in the Fallopian tube leads to occlusion of the abdominal ostium, an event usually complete by the sixth but often delayed to the eighth week following impregnation. It is therefore a comparatively slow process. (When the ovum is lodged in the ampulla of the tube the ostium cannot close.) So long as the tubal ostium remains open the ovum is in constant jeopardy of being extruded through it into the peritoneal cavity, especially when the ovum lies near or in the ampulla of the tube. When an impregnated ovum is thus extruded from the tube into the general peritoneal cavity it is invariably in the condition of a mole, and the accident is always accompanied by hæmorrhage. The extrusion of a mole in this way is indicated by the term "tubal abortion." Free hæmorrhage may occur from a gravid tube and the mole be still retained in consequence of its attachment to the wall of the tube. Under such conditions the bleeding may be repeated; this is known as "incomplete tubal abortion." Some of the most striking instances of recurrent hæmorrhages from gravid tubes occur when the ovum is too large to pass through the ostium. There is a variety of dilated tube which resembles a wine jar (amphora) without handles, and the ovum, though free to move about within the dilated portion of the tube, is as safely imprisoned as the wooden pea in a schoolboy's whistle.

FIG. 4.



A Fallopian Tube in which rupture occurred. The ovum escaped through the unclosed ostium, and at the time of the operation was lying among the fimbriæ of the tube.

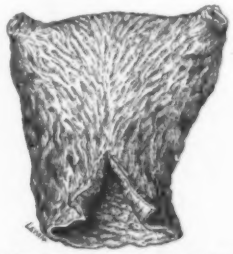
In some of these specimens the mole remains united by a portion of its circumference to the tubal mucous membrane.

A gravid tube may burst and the mole escape into the peritoneal cavity through the unclosed ostium. A specimen demonstrating this is represented in Fig. 4. I removed the parts from a woman twenty-nine years of age by abdominal section. At the time of the operation the mole was lying among the fringes of the tube and the ostium was widely dilated. On examining the tube a small rent was found in its walls capable of admitting the point of a pencil. At the time of the operation the mole was lying among the fimbriæ of the tube and the ostium was widely dilated. The specimen is of value because it demonstrates that because an adventitious opening is found in the wall of a gravid tube, it by no means follows that the ovum escaped through it. (Fig. 4.) I was of opinion that the term "tubal abortion"

was introduced into literature by Keller; but this was an error, for G. Veit, in an interesting paper entitled "Behandlung der Extrauterine Schwangerschaft,[3] distinctly refers to the extrusion of an impregnated ovum through the abdomina ostium without rupture of the tube, accompanied by hæmorrhage, under the term of "tubal abortion," and illustrates the condition by a sketch of a specimen. Like all who have observed this condition, he points out that the accident is a grave one for the patient. My own experience is that the hæmorrhage is more abundant in cases of tubal abortion than from rupture of the tube.

It will, perhaps, be useful to offer a few remarks on the decidua. When a Fallopian tube becomes gravid a decidua forms in the uterus, and this curious structure has a diagnostic value. This decidua is rarely retained until the completion of gestation and thrown off during the false labour. Usually it is discharged during the early period of pregnancy in small fragments, without producing pain, or else it is expelled *en masse* with symptoms of miscarriage. When a gravid tube ruptures or aborts, the uterus becomes disturbed and the decidua is expelled. When a decidua is discharged whole it represents a cast of the uterine cavity. It is in shape pyramidal; the base corresponds to the fundus of the uterus, and at each angle there is an orifice corresponding to the uterine opening of each Fallopian tube. The apex of the pyramid is occupied by a circular hole corresponding with the dilated internal orifice of the cervical canal. This is smooth and rounded, whilst the smaller orifices corresponding to the uterine ends of the tubes are ragged. The exterior of the decidua is shaggy, the interior smooth and dotted with many minute puncta representing the orifices of the uterine glands. (Fig. 5.)

FIG. 5.



A Uterine Decidua formed in a case of tubal pregnancy, discharged at the end of the eighteenth week of gestation.

The unnecessary formation of a decidua in the uterus when a tube is gravid, or in the cornu of a bicornuate uterus when the opposite cornu is impregnated, is a curious illustration of the traditional way Nature does her work, and teaches a lesson some of us may well take to heart. There is little doubt that the majority of cases formerly classed as pelvic hæmatoceles are in reality the result of rupture or abortion of gravid tubes. The cases in which doubts arise are those in which women are seized with symptoms indicating internal hæmorrhage. On opening the abdomen free blood is found, often in abundance. The tube is widely dilated, perhaps ruptured, and clots of blood hang about the fringes, yet no embryo or mole is detected. In some of these cases a decidua is discharged from the uterus. These doubtful cases will become fewer as operators become familiar with the tubal mole. The mole is so different from ordinary clot that there should be little difficulty in distinguishing it, except in cases in which it is very small.

The following is a summary of the views contained in this paper:—(1) The transformation of a tubal ovum into a mole or apoplectic ovum is beyond doubt; (2) the majority of specimens described as examples of hæmato-salpinx are gravid tubes; (3) rupture of a gravid tube and tubal abortion are the common causes of pelvic hæmatocele; (4) mesometric rupture of a gravid tube is a common cause of pelvic hæmatoma; (5) to affirm that bands of fibrin resemble chorionic villi indicates great want of histological knowledge; (6) every clot of blood found in a Fallopian tube is not a tubal mole.

Since the discovery of the tubal mole specimens of non-gravid Fallopian tubes are found to be so infrequent that in the last report of the museum of the Royal College of Surgeons I notice an account of "an unequivocal example of hæmato-salpinx." This is a fair indication of the revolution which has taken place in our knowledge of the early stages of tubal pregnancy.

Queen Anne-street, W.

[3] Verhandlung der Deutsch Gesch. für Gyn., 1890, S. 171.

A CASE OF
LOCALISED GANGRENE OF THE LEG OCCURRING IN THE COURSE OF SCLERODERMA; AMPUTATION THROUGH THIGH; RECOVERY.

BY ALEX. G. R. FOULERTON, M.R.C.S., L.R.C.P. LOND.

THE following is the record of a somewhat unusual episode in the history of a case of general or diffused scleroderma which occurred in my practice at St. Bartholomew's Hospital at Chatham. With the clinical details of the case previously to the supervention of gangrene I do not now propose to deal further than by giving the briefest abstract possible.

E. A——, then aged twenty-two months, was first seen in November, 1888. About a month afterwards the first recognisable signs of scleroderma appeared in the right thigh. The whole surface of the body subsequently became more or less involved in the disease, which at last presented the usual characters of the fully developed stage of diffused scleroderma in children. I may here refer to the accompanying engravings, which were taken from photographs. They show fairly well an earlier and a later stage of the disease. Fig. 1, from a photograph taken in April, 1889, shows the right lower limb considerably enlarged; certain pigmentary changes are not, however, apparent. When the photograph of Fig. 2 was taken (April, 1890) the stage of gradual shrinking of the tissues had set in. In June, 1891, the condition of the right lower limb was as follows. The hip, knee, ankle and phalangeal joints were all strongly flexed and immovably fixed. The skin of the limb was everywhere tightly bound down to the underlying tissues; nowhere could it be pinched up or shifted laterally over the deeper structures. It was mottled here and there with patches of brownish pigment, and between these it was for the most part of a dead-white colour. The whole limb was considerably shrunken and very hard, feeling as cold wax to the touch. Tactile sensibility was apparently but little affected. The femoral pulse could be just felt, the pedal pulse not at all. The joints of the other limbs were affected in like manner, but in a less degree. It may also be mentioned in passing that whilst the skin and subcutaneous tissue and the joints of the other limbs were universally affected the several changes were from the first more strongly pronounced in the right lower limb than elsewhere.

On July 1st I found that during the night a bulla of the size of a crown piece had formed on the dorsum of the right foot. The whole foot was tender, and the child seemed to be extremely ill. The bulla was punctured and a quantity of blood-stained serum escaped. The foot was washed with a weak solution of iodine, the bulla was sprinkled over with iodoform, and the leg was then enveloped in absorbent wool. Next morning it was found that an exactly similar bulla had formed over the internal condyle of the right femur. This was dealt with in the same way as before. The child's condition was worse, and stimulants were given freely. On July 4th she began to improve. Moist black sloughs occupied the sites of the two bullæ. The child's condition remained fairly satisfactory until July 18th, during which time the sloughs were kept practically odourless by due attention to cleanliness, but were not otherwise interfered with. On July 19th things changed for the worse again. The temperature, hitherto normal, rose to 100° F. in the evening. The pulse was very small and irritable. The child herself was restless and seemed in pain, moaning continually. On July 21st she was all but exhausted, and the case seemed to be well nigh hopeless. In the evening the two sloughs separated, leaving the tarsal bones and the inner aspect of the lower end of the femur quite bare, clean and white. The skin of the leg elsewhere was in exactly the same condition as it had been before the supervention of the gangrene, which had never evinced the slightest tendency to spread. There was a noticeable absence of any signs of inflammation in the neighbourhood whence the sloughs had

separated. The child had hitherto been treated as an out-patient, as the parents were very averse to her removal into hospital. However, I still felt justified in urging them to give her the last chance that an operation might afford, poor though that chance seemed to be. She was accordingly admitted on July 22nd, and I amputated the limb on the following morning. In amputating a circular incision down to the bone was made in the middle third of the thigh, the skin and muscles being divided at the same level. From the circular incision a longitudinal one was carried up on either side of the thigh. The anterior and posterior flaps thus formed were then raised from the femur by means of a director. These flaps were so rigid and hard that some difficulty was experienced in dividing the bone sufficiently high up; and it was only after somewhat forcible retraction of the flaps and tissues above them that the femur could be divided with bone forceps at the required level. The femoral and profunda arteries were then tied and an elastic tourniquet which had been lightly applied was removed. Both the vessels tied were of extremely small calibre and no other bleeding points were seen. The stump was then washed with weak iodine solution and some boracic acid powder was dusted over the raw surface. A narrow slip of gutta-percha tissue was placed in either angle of the wound to provide for drainage, the flaps were brought together by deep and superficial sutures, and the stump dressed with absorbent wool. The result of the operation was altogether satisfactory. The child's condition was markedly improved within an hour or two of the operation and her progress was continuous. The amputation was performed on July 23rd and for the next few days the temperature rose to about 100° F. in the evening, falling to the normal in the morning. On July 27th the stump was dressed for the first time. There was very little discharge, but the extreme edge of the anterior flap was just blackened for about a quarter of an inch. The drainage slips of gutta-percha tissue were removed and the stump was dressed as before. The next dressing was on July 30th, when two of the four deep sutures were removed. The stump was then dressed for the third time on Aug. 2nd and all the remaining sutures were removed. The small shred of blackened skin had separated, the flaps had firmly united, and the line of union had almost healed up. A day or two later I left Chatham and did not see the child again until Sept. 21st. She had then been discharged from the hospital for some time and a considerable improvement in her general condition was noted. She looked stronger and better than she had been at any time during the previous two years. The tissues of the remaining portion of the right thigh were much softer than they had been before the operation. Portions of the skin elsewhere showed a similar improvement. In short, the scleroderma appeared to be undergoing involution. I saw the child again in December, 1891, and in January and February of the present year, and the improvement appeared to be sustained. After February I did not see her again until June, and was much disappointed to find that the improvement had been but temporary and that the disease was now progressive. Whether the operation, by producing some alteration in the general nutrition, or the treatment in hospital was responsible for this temporary improvement—or whether, on the other hand, it was purely accidental—I am quite unable to say. When last seen the stump surface was all that could be desired; but, owing to the extreme flexion of the hip-joint, the stump itself was drawn up against the abdomen.

In conclusion, one or two general points may be referred to. First, the occurrence of gangrene must be noted as a most uncommon complication of a disease itself sufficiently rare to be of interest on that account alone. Then, again, I regard the result of the amputation, through tissues but ill adapted to such a procedure, as having been extremely fortunate. A third point of interest is the condition of the parts removed. The cross section of the portion of the limb amputated on July 23rd showed that all the tissues of the part were affected. The skin was intimately connected with the subcutaneous tissue, which was very hard and considerably increased in thickness. The subcutaneous tissue could not be peeled off the fascia of the muscles without tearing away the surface of the degenerated muscle substance in places. The muscles had undergone complete degeneration and were of a greyish waxy appearance. The point which perhaps struck one most was the almost bloodless condition of the limb. As remarked previously, after the femoral and profunda arteries had been tied there was not a trace of oozing from the raw surface. The bones were much atrophied. I am unable to give any further details as to the morbid anatomy. The limb was put on one side for further examination in a preserving fluid, which unfortunately proved inadequate for its purpose, and consequently when the jar containing it was opened a week or two later the specimen was found to be in an advanced stage of decomposition, so that further examination was impossible. It is not proposed to discuss the pathology of scleroderma at any length

FIG. 1.

FIG. 2.

here. I would only suggest that to classify it with skin diseases, as is commonly done, is to take a somewhat narrow view of the subject. I must say that it seems to me to be highly probable that the localised form of scleroderma sometimes met with in adults is pathologically a different disease from the diffused scleroderma usually met with in young children. Clinically, at any rate, the difference is considerable. In the case under consideration the changes in arteries, muscle substance and bone are quite sufficiently explained by regarding them as secondary degenerations due to disuse. I would go a step further, and suggest that the skin changes may also be ranked as secondary. I would then regard scleroderma rather as a disease primarily affecting a widely spread and genetically allied group of tissues of mesoblastic origin, and including the subcutaneous areolar tissue, the fasciæ of muscles and the fibrous capsule of joints. This being assumed, the fixation of the joints with disuse of the limbs would be followed by atrophy of muscle and bone, and diminished vascular supply would result in the loss of function, and in its turn accentuate the degenerative changes already in progress. These degenerative changes with impaired vascularity culminated in gangrene in the case just related. Pigmentary and other changes in the skin may also be due to altered conditions of nutrition in the skin overlying a portion of the subcutaneous tissue already affected by the disease. To support, however, my contention as to the original site of the disease processes much more would have to be advanced than has been done here. This I shall endeavour to do in a future paper.

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WHY DO STRICTURES OF THE URETHRA RELAPSE?

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SURGEON TO THE LONDON HOSPITAL.

IT is notorious that in the vast majority of cases strictures of the urethra, if left to themselves after dilatation or division, recontract and in a little while become as narrow as they were before. It is not, perhaps, so well known that this is not an invariable rule. I have published several instances in which permanent recovery, proved by the duration of many years, followed external urethrotomy, and I have shown that the same result may occur after prolonged perineal drainage, while it is not uncommon to meet with cases in which, after internal urethrotomy, catheterism has been practised, at first diligently, then more or less carelessly, and at length has been neglected altogether for many years without there having been any perceptible degree of return. It seems, therefore, of some interest to consider what such cases have in common, and why methods of treatment apparently the most diverse succeed sometimes, when usually they are followed by so different a result. At first sight the particular kind of stricture does not appear to have anything to do with it. Those that were treated by external urethrotomy were of the severest type, dense and hard, with an enormous amount of peri-urethral infiltration; the others for the most part could not be felt from the outside, and had been noticed only recently, although from the history it was probable some contraction had been there for a much longer period. All of them, however, presented certain features in common. The stricture was in every case deep down in the urethra; it had followed gonorrhœa, sometimes one attack, more frequently several. There had been in all a long period of gleety discharge, and no patient had noticed any alteration in the size of the stream until some considerable time had elapsed. Strictures that agree in these respects may be urethral or peri-urethral—that is merely a question of time; the important feature is that in none of them is there any actual loss of substance; the mucous membrane lining the urethra has not been destroyed at any one spot; the constriction is not due to the contraction of a scar, but to the organisation and condensation of the inflammatory exudation that is poured out in and around the walls of the canal. This distinction is not taken into sufficient account in the system of classification ordinarily adopted for organic strictures of the urethra. They are described in terms expressive of their shape, the appearance they present in the bodies of those who have died from the complications they cause, the special symptoms that accompany them, or some other and often entirely accidental circumstance in connexion with them; but their mode of origin, whether they have followed a syphilitic sore or extravasation of urine, or an attack of chronic inflammation, and the immediate cause of their formation, whether they have been preceded by ulceration and destruction of the mucous surface or not, are not connoted in any way. Yet this is the main distinction which marks them off at once into two great classes, one in which the whole thickness of the lining membrane of the urethra has been destroyed at some one spot and the other in which it has not. In the ordinary form of gonorrhœal stricture it has not; the contraction commences as an inflammatory effusion in the substance of the mucous and submucous layers, very often at the base of a little button of granulation. Unless the attack has been very severe, attended with hæmorrhage, or treated with unnecessary vigour, the lining membrane, although it may be condensed and hardened, is not destroyed; it can nearly always be dissected off, thinned it is true and discoloured, with its surface altered in texture and appearance, but still intact. There is no cicatrix in the ordinary sense of the term. On the other hand, syphilitic sores nearly always leave a contracting scar, usually near the orifice; so does extravasation of urine, unless the opening in the urethra is a mere pinhole, and so may gonorrhœa if the mucous membrane is destroyed at any one spot by ulceration or torn by the passage of catheters or in the barbarous attempt at breaking down chordee. Cicatricial strictures of this kind are distinguished by the rapidity with which they form and the speed with which they recontract. I have known them well marked within a few weeks of the attack that originated them, and there can be little doubt that for them at least, no matter what treatment is adopted, regular catheterism at frequent intervals is always necessary.

With the others, those in which there has been no breach of surface of any size, the case is different, and close observation of a considerable number has convinced me that a certain proportion can be cured permanently by adopting suitable methods and maintaining the treatment for a sufficient length of time. The cause of their contracting originally is different. It is not now the presence of a scar due to a loss of surface, which nothing but transplantation can replace; it is merely the slight persistent irritation kept up by the passage of the urine over a tender part of the urethra. At first the progress of the stricture is exceedingly slow, the irritation is very slight and the amount of lymph effused very small, scarcely making a perceptible difference in the calibre of the urethra even at the end of months; but as years pass by this fractional amount accumulates and grows harder, the obstruction becomes more marked, the straining and irritation that it causes more severe, and the amount that is poured out larger and larger until at length it forms a dense mass, filling the interstices not only of the mucous and submucous layers, but those of the corpus spongiosum and bulb as well, growing harder and more rigid with ever-increasing rapidity the longer it lasts; and it is for the same reason, and not because there is a scar, that these strictures relapse so often after treatment. The whole of the obstruction is not dispersed; some, ever so little it may be, is left, and sooner or later the same old vicious circle begins again, the obstruction causing irritation and the irritation making the obstruction worse. Unless the whole is removed and the lining membrane of the urethra restored to its natural flexibility there can be no permanent cure. How this is to be accomplished varies naturally with the kind of stricture; but whatever the treatment adopted, whether it is division or dilatation, it must always be borne in mind that this is only a preliminary. Dilatation may stretch and urethrotomy may divide the rigid lymph, but neither really does away with the obstruction. It is diminished so that there is no straining and much less irritation during micturition, but that is all. The stricture tissue is still there; complete removal can only be effected by the very slow process of fatty degeneration and absorption, and for this it is absolutely necessary that there should be a long period of perfect rest and freedom from all spasm and irritation. How far this can be secured by dilatation alone is very doubtful. It may succeed if the stricture is very recent and still confined to the walls of the urethra, but if there is already a large amount of peri-urethral infiltration it is almost useless, except as a temporary measure; and if the stricture is old and hard, whether it is confined to the mucous and submucous coats or not, it is scarcely any better, even though it is carried to the point of extreme distension. The lymph is

stretched, a great deal of it disappears and the muscular fibres that surround the urethra are paralysed for a time; but in a very little while after the catheter is withdrawn the contraction begins again. The tenderness and irritability are still there; the tone of the muscular fibre returns and as soon as the stream of urine begins to unfold and open out the walls of the canal the stimulus sets up a slight but sufficient degree of contraction. So long as the stricture is wide the obstruction this causes is scarcely perceptible: the hyperæmia passes off almost at once, and there is so little exudation that the occasional passage of a catheter is sufficient to keep the channel dilated; but if the case is neglected, little by little the lymph collects until at length, when the contraction has passed a certain point, further progress is by leaps and bounds. For a long time I have practised internal urethrotomy after thorough dilatation, with the view of preventing muscular spasm and giving a long period of perfect rest for the removal of the last of the exudation; and although it is difficult to prove, I feel convinced that this method has met with a higher degree of success than either dilatation or internal urethrotomy by itself. Internal urethrotomy without previous dilatation succeeds sometimes, just as simple dilatation does in recent cases in which the stricture tissue is confined to the walls of the urethra, but not in those in which the exudation is old and hard, or very widely spread; absorption is too slow. The muscular fibres are divided so that there is no spasmodic contraction; but division, however thorough it is, does not restore the parts to their natural state. The expansion of the urethra when the urine passes down it is not smooth or even until the whole of the exudation has been absorbed; and this takes too long. Before the old and hardened lymph has had time to disappear completely the obstruction and irritation that it causes have led to a fresh deposit and the narrowing has commenced again. Unless the stricture is a recent one, and the exudation comparatively soft, dilatation is always necessary after internal urethrotomy—at any rate, for a time. Occasionally, if it is kept up diligently for some months and gradually left off, no recontraction takes place. External urethrotomy, on the other hand, practically fulfils all the required conditions, and to this it owes its success in some of the very worst cases. The whole of the urine escapes without tension or straining; muscular spasm is out of the question; however hard or widely spread the exudation, the whole of it must soften and melt away before the wound will close, and meanwhile the channel regains its natural size and the walls their flexibility. The rest that it gives is perfect, and certainly in some instances absorption is complete and the cure permanent, a fact that deserves more attention than it has hitherto received, for this method of treatment is rarely given an opportunity except in cases in which every other measure, including dilatation and internal urethrotomy, has been tried and has failed time after time.

Wimpole-street, W.

TWO CASES OF DERMATITIS GANGRENOSA INFANTUM.

BY CAMPBELL WILLIAMS, F.R.C.S. ENG. &c.

DERMATITIS GANGRENOSA INFANTUM (Crocker) was first described by Mr. Hutchinson under the name of "varicella gangrenosa." As it is one of the rarer diseases of childhood I venture to record the two following cases. They are to an extent interesting in that in neither case could one obtain history or evidence of vaccinia or varicella as an etiological factor. Nor were they, as far as could be seen, the subjects of rickets or congenital syphilis. In the case that recovered the child was unvaccinated, and had not suffered from chicken-pox or other febrile disorder. It was badly nourished. Five preceding children had died in infancy from "consumption of the bowels." As is well known, this vague term often means diarrhœa from improper feeding. The second case had likewise escaped the usual preceding ailments, but was the subject of miliary tuberculosis. Dr. Thomas Barlow first pointed out the frequent presence of tubercle in this disorder. In 1888 I made a necropsy upon a child that had died from gangrenous dermatitis, when Dr. Barlow drew my attention to the combination, which was also present in that case. From a pathological standpoint these cases may be regarded as due to microbic infection. In a way they are analogous to acute necrosis if skin is substituted for bone.

CASE 1.—C. W——, aged two years, male. This child was admitted into University College Hospital under the care of Mr. Christopher Heath on Sept. 9th. Being in charge of the skin department in the absence of Dr. Radcliffe Crocker, I was asked to see the case. The child was the younger of two. The elder had died from a tumour in the abdomen, the nature of which could not be elicited. The mother had also had two miscarriages. No signs, present or past, of infectious disorders were obtainable. The mother asserted that the child never had chicken-pox and that he was vaccinated in the early months of life. He did not snuffle, nor was there any discoverable evidence pointing to congenital syphilis or rickets. The eruption was first noticed on Sept. 7th—i.e., two days before admission. It was described as having begun as pimples about the size of pinheads. These became vesicles and later became covered by black scabs. The patient had diarrhœa for fourteen days prior to Sept. 9th, and had vomited slightly during that period. On admission the child seemed moribund. There were signs of broncho-pneumonia at the left apex. The pulse was small and rapid, 120, whilst the temperature was 99°F. During the night it rose to 102°. This fell next day to 101°, at which point it remained until just before the child's death. This occurred twenty-seven hours after admission. During this time he had twelve stools, which were very offensive, but brown in colour. There were altogether twelve ulcers upon the child's body. There was one upon the scalp in the region of the lambdoid suture. Here the scab had not separated and was suggestive of varicellous origin of the disease; but there were no other traces about the head or face to support that theory. In the remaining lesions the slough had separated, leaving typical ulcers. They were roundish, sharp-edged and conical. The sides and bases were covered with a thin adherent brownish-black slough. An inflammatory areola of about one-twelfth of an inch in width was visible around each lesion. The ulcers varied in depth from three-quarters to a quarter of an inch. There was one upon the left buttock, about the size of a shilling; it extended down to the deep fascia. A group of four occupied the posterior aspect of the right thigh, another group of four upon the right calf and two small ones upon the flexor surface of the left thigh. The left calf was clear. None of the ulcers in these groups had coalesced. The skin between them was apparently healthy. The child was fed on milk and brandy. The ulcers were dusted with iodoform crystals and dressed with iodo-vaseline.

The post-mortem examination disclosed the presence of miliary tuberculosis. Both lungs were studded with tubercles, whilst the apex of the left was quite pneumonic. The apical portion of the left parietal pleura was adherent to the visceral, and there was a patch of tubercle upon it. Two bronchial glands had caseated. The liver, spleen and kidneys, together with the mesenteric glands, were all affected. The brain was not examined.

CASE 2.—J. N——, aged seven months, a poorly nourished male infant. A brother, aged nine years, was alive and healthy. The next five children had all died in infancy, marasmic. This boy, the youngest born, was said to have been strong at birth. For the last few months the infant had been put out to nurse during the day whilst the mother was at work. On Aug. 30th I first saw the child. He did not seem seriously ill. The temperature was 99·8° F. The child had not been vaccinated and was said not to have had chicken-pox or other exanthem. There were certainly no recent signs of congenital syphilis. The disease was stated to have started a week previously as pimples. These the mother ascribed to bug bites. The papules were noticed to rapidly enlarge and become covered with black scabs. When seen by me the child had an ulcer on the right buttock from which the scab had separated, leaving a circular, depressed ulcer of half an inch in diameter and about as much in depth. The wall was covered by black-brown slough. There was a similar one on the right flank and a third one upon the abdomen. Here ulceration was going on beneath a black crust. Lastly, there was one upon the upper lip; it was quite superficial, but there was destruction of tissue such as one does not observe in impetigo contagiosa. A gland in the right inguinal region suppurated and was opened on Sept. 2nd, and did well. The child was properly fed and given small doses of cod-liver oil. As the bowels were irregular minute doses of mercury with chalk were given every other night. The ulcers were first dressed with dilute ammoniated mercurial ointment. As they did

not show signs of improvement iodoform crystals and iodo-vaseline were substituted. They at once commenced to heal by granulation, and by Sept. 27th they were all cicatrised. My friend, Dr. W. Carr, kindly saw the case with me and concurred in the diagnosis.

The above cases go to confirm the view held that the sphacelo-dermatous condition is not necessarily secondary to varicella or vaccinia. I believe Mr. Hutchinson acknowledges this. That tuberculosis takes a very prominent position amongst the predisposing causes, the frequent localisation of the disease to the buttocks and thighs, where the skin is inflamed or sore from wet diapers &c., suggests that the process is primarily one of inoculation. The rarity of the disease and the frequency of all the predisposing causes seem in favour of a specific micro-organism as the direct excitant.

Welbeck-street, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se compare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

METROPOLITAN HOSPITAL.

ULCERATIVE ENDOCARDITIS; CEREBRAL HÆMORRHAGE; DEATH.

(Under the care of Dr. HOWARD H. TOOTH.)

THE difficulty which may be met with in making a correct diagnosis in some of the milder cases of ulcerative endocarditis is well illustrated by the account of this case. It is also interesting to the profession from the fact that the cause of death was cerebral hæmorrhage, this mode of termination being unusual. Our readers will recollect that Dr. Osler in his Gulstonian Lectures, which we published in THE LANCET,[1] divides the disease into three groups—the pyæmic, the cardiac and the cerebral; the third of these does not, however, refer to cases in which hæmorrhage into the brain is met with, but to those in which a meningitis has developed, often of a suppurative character. For the notes of this case we are indebted to Mr. C. P. Handson, house physician.

G. H——, aged twenty-two, was admitted into the Metropolitan Hospital on Sept. 15th, 1892. He was a painter by trade. In September, 1891, the patient felt pain in the left side of the abdomen, which he was told by a doctor was due to lead poisoning. This lasted more or less till Christmas, 1891, when pain in the "stomach" came on suddenly and "rheumatism" in the muscles of the leg. The tips of his fingers at that time became swollen, turning blue and red. He had been attending as an out-patient at this hospital since Feb. 16th, 1892. He did not think there had been much improvement, and he had lost three stone in weight since Christmas, 1891. He had suffered from rheumatic fever three years ago, from "rheumatism" three times since, and from influenza three years ago. He had also one "fit" last year; another a few weeks ago. The nature of these was doubtful.

On Sept. 16th the condition of the man was as follows: Extremely anæmic and emaciated; no blue line on the gums; tongue black (had been taking iron) and dry; fingers clubbed; pulse 68, soft; respiration not accelerated. Heart: Apex beat in the fifth space just inside the nipple line; dulness up to third rib. At the apex there was a loud systolic murmur heard also at the angle of the scapula. Over the pulmonary area there was an occasional systolic murmur; the second sound was accentuated there. Lungs: Great sinking in of supra-spinous fossæ behind; no dulness; no râles. Liver: Dulness up to sixth rib; not felt below the ribs. Spleen: Not felt; dulness not increased. Abdomen rather retracted and muscles held rigidly; nothing abnormal felt. Legs very wasted; wasting of thenar eminences; no wrist or foot drop; knee-jerks present, though slight; no impairment of sensation. Urine acid, sp. gr. 1012; a cloud of albumen; no blood.

Sept. 23rd.—Heart: Apex felt best in the fourth space one inch outside nipple line; distinct heaving impulse seen; systolic apex murmur louder. Has been gradually growing very drowsy; his mental condition is peculiar; he is continually whining, "I want to go home"; refuses food and will not wash himself, and acts generally like a refractory child.

24th.—Has been taking food properly since an attempted nasal feed.

30th.—General condition unaltered. Urine acid; sp. gr. 1018; thick cloud of albumen.

Oct. 2nd.—During the night he got out of bed, was put back again, and shortly became comatose, with Cheyne-Stokes breathing and dilated pupils. Death followed soon after. During his stay in the hospital the temperature was of a hectic type, ranging from 96·8° to 101° F. Usually there was a difference of two degrees between the morning and evening temperatures. He complained of thirst; the bowels were obstinately constipated; the respiration and pulse were never accelerated.

Post-mortem examination.—Brain: Both lateral ventricles were filled with a recent clot, which formed a complete cast of the right and anterior part of the left ventricle. In the right lateral ventricle there was a separate clot pushed to one side by the larger one, which appeared older than the rest, and was beginning to break down. There was also a blood clot round the medulla in the fourth ventricle and at the anterior surface of the pons and a small hæmorrhage over the superior frontal convolution of the right hemisphere. Lungs: Both bases congested and œdematous. Heart: Right side much dilated and thinned. Left side: Large vegetations all over the posterior wall of the left auricle. Nearly all the mitral valve was absent; what was left was much thickened (evidently of old standing) and covered with recent vegetations. Aortic valves healthy. One or two ulcers were present on the endocardium of the left ventricle. Weight eleven ounces and a half. Stomach and intestines normal. Liver rather enlarged with venous engorgement. Spleen much enlarged, reaching just across the middle line. Weight twenty-two ounces and a half. There were two triangular ischæmic infarcts and one softer hæmorrhage. In the right kidney there were two infarcts; in the left three. The capsules peeled readily, and there were no signs of interstitial change.

Remarks by Dr. TOOTH.—The chief points of interest in the case are the following: 1. The difficulty of diagnosis. Chiefly owing to the history it was thought probable that he was suffering from acute anæmia after lead poisoning, although this did not explain the temperature. The question of ulcerative endocarditis was mooted, but no certain diagnosis was made. From the albuminous urine it was thought he had chronic nephritis 2. There were no rigors or attacks of localised pain due to infarcts while in hospital. 3. His peculiar mental condition. In connexion with this it would be interesting to know the exact time the first hæmorrhage corresponding to the older clot took place. There was no paralysis or disturbance of sensation. 4. As regards the immediate cause of death by cerebral hæmorrhage, Dr. Bristowe[2] mentions one case under his care in which death resulted from effusion of blood into the substance of the brain, probably following an embolic aneurysm. 5. The clinical fact that, owing to various reasons—e.g., stomach resonance and rigid abdominal walls,—it is possible to fail to detect during life a spleen weighing twenty-two ounces and a half.

[1] THE LANCET, vol. i. 1885, p. 415 et seq.

NORFOLK AND NORWICH HOSPITAL.

A CASE OF NEPHRECTOMY FOR CARCINOMA.[1]

(Under the care of Mr. CHAS. WILLIAMS.)

THE following is a description of a case of primary carcinoma of the kidney, and bears out the statement that primary carcinomatous tumours of that organ are usually of the encephaloid variety. The presence of the purulent collection in the upper part of the organ probably accounted for the pyrexia, and rendered the diagnosis from calculous

[2] Theory and Practice of Medicine, sixth edition, p. 574.

[1] An account of this case was read at the meeting of the Norwich Medico-Chirurgical Society, May 3rd, 1892.

kidney the more difficult. It is, however, always difficult to diagnose this form of tumour until the disease is far advanced, and, as the success of any operative treatment depends chiefly on the removal of the organ, it is advisable to publish these cases in some detail when they are met with, so that the earlier symptoms may be better known. The possibility of the coexistence of calculus and malignant growth of the kidney must not be overlooked, for "the liability to error is increased when gravel or small calculi are, as is not uncommon, present in the pelvis of the cancerous organ."[2]

C. T——, aged fifty-eight, was admitted into the Norfolk and Norwich Hospital on the 1st of April, 1891, complaining of excruciating pain in the left lumbar region. She was the wife of a farm bailiff and was accustomed to hard work. Fifteen years ago she had a severe attack of sciatica of the left side; it lasted for several weeks, and had the effect of reducing her, from being a fine woman, to a mere skeleton. From this she never thoroughly recovered. Some nine years later symptoms of kidney trouble showed themselves, occasional pain being the most marked; still she was well able to attend to a large dairy and to maintain a fair state of health until twelve months ago, when she noticed that her urine was thick and sometimes stained with blood. A little later pain came on in the left loin and localised itself there and became very intense. Later still she was obliged to keep her bed and to take opium somewhat freely. Blood was now appearing in the urine in large and frequent quantity. The pain usually came on during micturition and lasted for some time afterwards. There was no definite history of renal colic.

On admission she was greatly emaciated, very pale and looked proportionately ill, her eyes being shrunken and her voice weak. In the left lumbar region there was a very distinct bulging outwards, which swelling was just as distinct in front, especially when she was placed on her back. This prominent substance—evidently an enlargement of the left kidney—was hard to the feel, very movable and extremely painful when touched, and so were the parts in which the cutaneous branches of the lumbar plexus ramified. She could usually pass the night without a desire to micturate, but when the feeling came on she was obliged to get rid of the urine as quickly as possible, however small the quantity might be. The urine was generally dark coloured and turbid, and sometimes for a few days was perfectly clear; when in this condition its specific gravity was 1020, and it contained neither pus, blood, nor albumen. There was no evidence of disease in any of the viscera except that connected with the diseased kidney. Her temperature rose every night for four weeks from 101°–102° and fell to about 99° in the morning. She had a brother older than herself who had for several years suffered pain in the situation of the left kidney and profuse hæmaturia at frequent periods; he had passed several small calculi. The severity of her pain, its constancy and localisation rendered it necessary to perform an exploratory operation, the more especially as the weight of opinion was in favour of calculus, and the patient herself desired that something should be done to mitigate her suffering.

The operation was performed on May 1st. An incision four or five inches in length was made along the left linea semilunaris; the thin omentum and collapsed bowels were pushed to the inner side and detained there by means of a flat sponge, the meso-colon pinched up and a small hole made in it and enlarged with the fingers. The kidney was now exposed to view; it looked healthy, but greatly enlarged. The hand was passed over the right kidney and ureter. Both were found to be of normal size and healthy. A needle was thrust into the substance of the kidney towards the pelvis; no stone could be detected. An incision was then made into the organ and enlarged with the fingers, but no calculus could be felt; the material did not feel like that of normal kidney, but was crisp, tore like hard carcinoma, which it unquestionably was. Nothing now remained but to remove the enlarged kidney; the pedicle was brought into view and two large branches of the renal veins exposed. A silk thread was passed around the whole—the kidney, artery, veins and ureter—which could not be separated from the rest. Another ligature was passed round the pedicle close to the kidney and the pedicle divided between. The organ was now removed from its bed. There had been very free venous hæmorrhage from the kidney. A large cavity was left; this was well irrigated with warm water and sponged out, a glass drainage-tube placed in the wound and the parts covered over with dressing. The kidney weighed thirteen ounces; its upper third was apparently healthy, but the lower two-thirds had become converted into true carcinoma. The capsule over this portion was firmly adherent and thickened. The upper part of the ureter was enlarged to about the size of a small orange and contained from two to three ounces of thin, fetid pus. The pelvis seemed to be almost obliterated by the growth of the disease. At 9.30 P.M. the report was that she had had a good deal of pain in her left side, which the injection of one-sixth of a grain of morphia had relieved; she had been perspiring profusely. Her feet were warm; pulse 100. She was not restless. There was no abdominal pain. She had been taking some gruel and champagne. A teaspoonful only of blood-stained fluid was drawn through the glass tube.

The next day the account was that she had been fairly comfortable; the pain had been completely relieved by the morphia; there was no tympanites. A small amount of red-coloured serum was drawn from the tube. Pulse 100, of better volume. She took small quantities of food well. Urine had to be withdrawn and was clear. In the evening she was very comfortable. The temperature was 99·2°, and there was no sign of peritonitis. Five ounces of urine were drawn off and about a drachm of fluid from the tube.

On the third day after the operation she was said to have passed a comfortable night, sleeping well and taking food. At about 4 A.M. she complained of abdominal and lumbar pain. This had been getting worse all day. The breathing was purely thoracic; there was no sickness, no hiccough. At 3 P.M. the pulse could scarcely be felt. The wound looked well; about half a teaspoonful of blood-stained fluid was withdrawn from the drainage-tube and eight ounces of urine were taken from the bladder. The abdominal pain increased in severity and she died the next day—the fourth from the date of operation.

At the post-mortem examination, made by Mr. Donald Day, the abdomen was slightly convex, there was no distension, the wound in the linea semilunaris was quite dry and the sutures firm; the wound opened easily; very little union had taken place. The abdomen contained about three pints of semi-purulent fluid, generally distributed over the cavity; a few recent adhesions were found. The glass drainage-tube passed directly through the lesser cavity of the peritoneum into the bed of the kidney. The wall of the cavity in which the kidney laid was lined with ragged black clots adherent to or in the meshes of the areolar tissue. No free clots or fluid blood were to be seen; the ligatures on the pedicle were firm and secure. No stone could be found in the ureter, which was of normal size. In front of the lumbar spine was a flattened, indurated lymphatic gland lying behind the vessels, nearly one inch in thickness and apparently a malignant infiltration. This was the only example of disease to be found.

Remarks by Mr. WILLIAMS.—This is the first nephrectomy that has been performed in the Norfolk and Norwich Hospital or in the city of Norwich. I have entered somewhat fully into the details of the case, especially in the description of the operation, inasmuch as the great question of the day is as to whether in these cases the surgeon should resort to the abdominal or the lumbar section. Dr. Gross, in an exhaustive paper on the subject, says that of 233 cases of extirpation of the kidney 129 recovered and 104, or 44·63 per cent., died. Of 111 by the lumbar incision, 70 survived and 41 died, the mortality being 36·93 per cent.; while of 120 by the abdominal incision, 59 recovered and 61, or 50·83 per cent., perished. He then observes: "It is thus to be perceived that the fatality of the abdominal operation is greater by 13·90 per cent. than that of the lumbar operation." If malignant growths be considered, of which he gives 49 cases, very much the same result obtains in each kind of operation. On the other hand, Mr. Knowsley Thornton, the most recent authority, up to 1889 had performed nephrectomy by the abdominal section in 25 cases: 20 recovered and 5 only died, a result 20 per cent. better than that generally given for all nephrectomies, including those by the lumbar section. Now Mr. Lucas claims a greater success by the lumbar. He has operated in six cases by the lumbar method and all the patients survived; but then this success was due to a judicious selection of the cases; not one was for malignant disease. Of the two kinds of operation I gave the preference to the abdominal, as being in every respect much the more suitable in this case. I had the same objections to the lumbar that Mr. Thornton has, and he gives seven. With such diverse opinions it is not surprising that nephrectomy should be looked upon with some degree of disfavour. No doubt the mortality has been increased by a selection of unfavourable cases or by delaying the operation too long. In

[2] Bristowe: The Theory and Practice of Medicine.

my case the result would, in all probability, have terminated differently had the patient been operated on a year previously before her system became worn out by continuous pain, the more especially as the woman was free from disease in any of her organs, and only one lymphatic gland was found diseased. From what I have read of the details of the cases which have been published it appears to me that much of the want of success which has attended the operations performed up to the present time has arisen as a consequence of delay of the operation. As in tuberculosis, so in malignant neoplasms—a diagnosis made early and an operation promptly and efficiently performed are the elements of success. My friend Dr. Burton-Fanning sent me the following account of the examination he had made of some of the material: "The microscopical examination of the tumour shows it to be encephaloid cancer. The amount of stroma is rather unusually large, and it is arranged in a typical areolar fashion. The cells contained in its spaces consist of large and small round epithelial cells."

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Amputation through Thigh, preliminary to, or in place of, Amputation through Hip in advanced cases of Hip Disease.

AN ordinary meeting of this Society was held on Nov. 8th, the President, Sir Andrew Clark, in the chair.

Mr. H. G. HOWSE read a paper on the Advantages of an Amputation through the Thigh, either as a preliminary operation to, or in some cases instead of, amputation through the hip, where the hip-joint was itself diseased and the patient in very bad condition. He took a case to illustrate the mode of treatment. In July, 1879, a boy aged fifteen had acute tuberculous osteitis of the left leg and the ankle-joint and early mischief in the left hip. He was very ill and emaciated, and had been going from bad to worse for three months. Amputation through the knee was performed on July 26th. Great improvement resulted, but suppuration in the hip necessitated excision of this joint rather later, from which he perfectly recovered. He left the hospital in June, 1880, and had remained quite well since. The position was advanced that much good might result in hip disease from amputation through the thigh: (1) by reduction of length of lever, having its fulcrum at the hip-joint, and so favouring rest; (2) by removal of a mass of tissue acting chiefly as blood-consuming and very little as blood-producing tissue, thereby probably favouring the production of blood of better quality and larger amount. Mechanical aids to rest were compared with nature's efforts by spasm of muscles fixing the joint. This spasm must be greater with a long than a short lever, and was probably an exhausting factor in the disease; much less would be required of the muscles controlling the hip-joint if the weight and length of the lever were lessened. In practice, after amputation above the knee, the immobility was so complete that no appliance was needed. If by this immobilisation the hip disease was not arrested excision might be successfully practised, as in the case in the text, the previous shortening making fixation easier; or amputation at the hip-joint might be required as in other cases, the patient's improved condition, resulting from the previous amputation and the slighter shock of the removal of a smaller mass of tissue, rendering this operation successful, though it would probably not have been so under the previous conditions. It was usual to explain the improved condition after amputation by the removal of diseased tissue with cessation of processes (pyæmia &c.) inconsistent with healthy nutrition; but the improvement after excision or arthrectomy was not so marked, though the removal of disease should be as complete in the one case as in the other. The removal of so much healthy tissue, which used up instead of forming blood, was a more probable explanation. Alternative lines of treatment in the case the subject of the paper were reviewed:—1. When first seen, amputation at the hip would have resulted most probably fatally, or in a bad stump for an artificial leg. Excision was inadmissible with coexisting disease of the leg. 2. After amputation of the leg, amputation at the hip would have left an inferior stump. The advantages to the patient were: (1) a stump more suitable for an artificial leg than any possible after hip amputation; (2) he was alive, which with other methods would have been improbable. This principle of treatment was applicable to a considerable variety of cases, as might be seen by examining the following list:—*Cases:* Group I.—1. Knee and hip disease on different sides; amputation of knee; great improvement in opposite hip; subsequent excision for relapse. Group II.—2. Amputation through the knee on the same side as hip disease; convalescence. 3. Amputation through the knee on the same side as hip disease; subsequent excision of hip; recovery (text). Group III.—4 and 5. Excision of hip, subsequently amputation through knee; convalescence. Group IV.—6. Excision of hip, subsequently amputation through knee and then through hip; recovery. 7. Phthisis and morbus coxæ; amputation through knee and subsequently at hip; recovery. 8. Old morbus coxæ; phthisis; lardaceous disease and rectal fistulæ; amputation through thigh; removal of rest of femur; improvement. Group V.—9, 10, and 11. Excision of hip and subsequent amputation through thigh in all; amputation at hip in two; all operative procedures carried out in safety; death in all from lardaceous or general tubercular disease.

Mr. LAWFORD KNAGGS then related two cases illustrating the treatment of Advanced Hip-joint Disease by Mr. Howse's method, of preliminary amputation near the knee. The method was indicated in cases of advanced hip disease when (1) excision had proved useless, or (2) when amputation at the hip would be too dangerous because of general feebleness or associated visceral disease. It offered a prospect of (*a*) retaining a portion of the limb, or (*b*) of saving a life that would be likely to be lost by other modes of treatment. Mr. Howse's method was to remove the limb by instalments. After amputation near the knee (first step) rapid improvement resulted, because (1) the amount of impoverished limb requiring nourishment was diminished; (2) there was greater freedom from pain from shortened leverage; and (3) as soon as the stump was healed patients were able to go out of doors on crutches. Finally, amputation of the shortened limb at the hip involved infinitely less risk in the improved condition than if carried out as a primary measure. The first case, a girl aged eight and a half, was the subject of advanced hip disease with much suppuration. The liver reached to the umbilicus. The urine contained one-fifth albumen, and amputation at the hip had been twice discountenanced at consultations of the hospital staff as certain to prove fatal. After nine months as an in-patient, and when her condition was at its worst, amputation at the knee was performed on March 9th, 1888. This healed, and all her symptoms improved. The sinuses healed, and for three months the hip mischief was quiescent. It relapsed; Furneaux Jordan's amputation was done on Oct. 19th, and fragments of bone removed through an enlarged opening in the acetabulum. She left the hospital convalescent. In January, 1892, all sinuses had been healed for a year; the hip disease was quite well. The liver could no longer be felt. There was a trace of albumen, and her general condition and colour were very satisfactory. In the second case there had been progressive hip disease for two and a half years in a girl aged nine. Excision had been done eighteen months previously. Amputation at knee was performed on March 9th, 1888; great improvement resulted. In August, Furneaux Jordan's amputation was practised, and necrosed bone was removed through an enlarged opening in acetabulum. Sinuses resulted and albuminuria developed. Her condition in July, 1891, was otherwise satisfactory. Points of importance: (1) Freedom from pain after removal of leg; (2) the children, who had been bedridden a long time, were able soon to get out of doors and run about on crutches and make themselves useful; (3) the improvement in the hip disease; (4) the diminished severity of the hip amputation and the small size of the large vessels; (5) the opportunity for more complete exploration of the pelvis in consequence of diminished gravity of the amputation.

Mr. BARWELL said that the idea was new in surgery to perform a mutilating operation below the seat of a disease, leaving that disease *in situ*. Mr. Knaggs had mixed up two classes of cases. Those in which the procedure was a preliminary to the larger operation of amputation at the hip illustrated a point which had been much discussed by surgeons, but that was not the chief point of the paper, which was the question of the relief to the hip gained by amputation of the thigh. An analysis of the cases recorded

in both papers showed that there were five cases in which amputation had been performed as a preliminary operation in hip disease. One of these appeared to be convalescent without further operation, while in all the others some further procedure had to be adopted, and he did not think that this bore out Mr. Knaggs' statement as to the benefits derived from their method. Mr. Barwell held that amputation was not a proper remedy for checking the spasm of muscles controlling the hip; we should rather aim at perfection of apparatus for supporting the limb.

Mr. KEETLEY said that seven years ago he published a paper having a superficial resemblance to those before them. His idea was that in a bad case of hip-joint disease the distal half and the proximate quarter of the limb should be taken away at an interval of about forty-eight hours. In considering the question of leverage, that applied externally should be estimated separately from that produced by the muscles themselves. He believed that the muscular spasm would continue to act just as unfavourably after the limb was amputated. He held that more shock was caused by an excision of the hip than by any amputation between the thigh and the hip, and he maintained that the proper order was first to excise and then, if necessary, to amputate. He concluded his remarks by criticising the alternative lines of treatment which Mr. Howse had appended to his paper.

Mr. R. W. PARKER said that he was in the habit of meeting with extremely bad cases of hip disease at the East London Children's Hospital among the poorest class of patients. It appeared to him that the patients were saddled with an extra difficulty if amputation were performed through the thigh and the hip and pelvic disease left untouched. The greatest difficulty in operating was the very excessive general oozing which occurred. After trying many methods he now adopted a modification of Furneaux Jordan's method—cutting down just above the knee, tying the artery and shelling out the femur. He then rapidly plugged the acetabulum, periosteal sheath and sinuses, and applied a bandage. Forty-eight or seventy-two hours later he opened up the limb again, took out the packing, removed all the disease that could be got at, freely irrigated, and then sewed up the stump, except at that part opposite the joint, which he left open for drainage. This gave him every advantage of Mr. Howse's method and much curtailed the hæmorrhage. The stump was far better than after the old operation, and a very useful lever was left for an artificial limb. In a case treated somewhat after this method by Mr. Shuter no new bone appeared to be formed; but in a case of his own a part of the femur had been reproduced, for, in treating a sinus later, he had cut down on the new bone. He had found that a hot-water mattress on the operating table materially warded off shock.

Mr. OWEN feared it was a dangerous doctrine to lay down that because a limb could not be kept at rest it should be cut off. He had found Thomas's splint and the stirrup and pulley both efficient to maintain rest of the limb. He referred to a case he had recently operated on of a boy in an advanced stage of hip disease, who was considered on consultation to be too ill to amputate at the hip-joint. He next day took the leg off above the knee and he intended later to make an incision along the side of the limb and shell out the femur.

Mr. DAVY so far coincided with Mr. Howse that if one could subdivide the procedure and make one huge operation into two lesser ones it would be better for the patient. His practice had been to excise first and amputate afterwards if necessary, and every case he had so treated had recovered. There were many ways better than amputation of securing rest to the limb. It was especially where pelvic necrosis existed that excision was to be recommended as a favourable and advantageous precursor to amputation at the hip, which might be afterwards required.

Mr. HOWSE, in reply, thought that many of the speakers had lost sight of the fact that these measures of treatment were not recommended for ordinary cases of hip-joint disease, but were only to be adopted in those extreme instances in which the only other alternative would be to leave the patient to die. His was precisely the class of case to which Mr. Parker had referred. He objected to the latter's method of operating that an enormous extent of periosteal sheath was left to increase the risk of sepsis, that the bleeding must be very great from such a wound, and that the shock was greater than that produced by amputation in the way he suggested. He objected to any one of the advantageous resulting conditions on which he had dwelt being discussed singly; they should all be taken together.

Mr. KNAGGS, in reply, called attention to the important fact that in the whole series there was no death as a result of the operation, and he felt sure that an equally happy result would not have occurred if all these bad cases had been submitted to primary amputation at the hip-joint.

MEDICAL SOCIETY OF LONDON.

Tubal Moles and Tubal Abortion.

AN ordinary meeting of this Society was held on Nov. 7th, the President, Mr. Hutchinson, in the chair.

Mr. BLAND SUTTON read a communication on Tubal Moles and Tubal Abortion, an abstract of which will be found in another part of our present issue. In illustration of his paper Mr. Sutton showed several pathological preparations and he made free use of the black board.

Dr. CULLINGWORTH referred to his now rather large experience of cases of tubal pregnancy. At a debate at the Medical and Chirurgical Society he had held that no man was justified in speaking of a case as one of ruptured tubal gestation unless some product of conception were found—embryo, amnion or villi. But he had since thought that in such a case as one of very early tubal abortion, where there were free bleeding and a large mass of blood in the peritoneum, one might fail to detect the very small products of conception. This was a case in which the history, the clinical and the pathological conditions favoured strongly a diagnosis of tubal gestation, although evidence of it might not be found. He asked if it were not possible for a Fallopian tube to become closed at its abdominal ostium upon clotted blood, the embryo and its immediate surroundings having escaped. If this could be so, it would introduce another element of difficulty into the differential diagnosis of hæmato-salpinx. He thought that it was at present impossible to limit the term "hæmato-salpinx" in the manner Mr. Sutton had suggested.

Dr. HORROCKS said that in cases where one could make out distinctly blood clot on the one hand and villi on the other the diagnosis was not difficult, but he held that cases were to be met with in which it would be impossible to distinguish one from the other, and he referred to one or two instances in support of this. Hæmato-salpinx, he thought, should be a general term, and it ought to include all cases in which blood was found in the Fallopian tube; it should be used, as pneumothorax was, independently of the cause of the condition, and he would include regurgitation of blood along the tube from the uterus, even if the tube were not distended by blood. He asked Mr. Sutton if he still maintained the same views as to the cause of the hæmorrhage, and he inquired if he regarded it as possible for the villi of the chorion to grow after the death of the embryo—his own opinion was that they did.

Dr. LEWERS wished to say a word or two as to the natural history of these cases of extra-uterine gestation. He believed that in many cases where the fœtus died at an early period complete recovery often took place without operation. Even when rupture had occurred, giving rise to pelvic hæmatocele, many of the cases did quite well under expectant treatment. He referred to a case of pelvic hæmatocele, due to rupture of an extra-uterine fœtation, that had been under his care at the London Hospital some six years ago, and where he removed the fœtus through an incision into the posterior vaginal wall. This case did quite well, but he believed the patient would have recovered equally well without interference. At the same time he quite recognised that there was a class of cases requiring abdominal section, but it was often a difficult matter to distinguish between such cases and those that would do equally well without it. Evidence of the continued development of the gestation sac furnished a valuable indication.

Dr. HEYWOOD SMITH inquired of Mr. Sutton the exact source of the hæmorrhage when large in amount. He supposed that the blood was usually poured out before the ovum reached the end of the tube. Did the blood come from the ruptured attachment of the ovum or from the ruptured tube? He asked also as to the usual locality of adhesion of the ovum to the tube. He likewise desired to know in what cases one might expect tubal abortion and whether there was anything usually to account for it, such as an accident, a slip, a jerk, or the passing of hard fæces, dislodging the ovum.

Dr. ROUTH thought that all the cases of hæmato-salpinx, except a very few, were instances of tubal gestation. There

were always some of the preliminary symptoms of pregnancy and a decidual membrane was passed per vaginam, and the latter if found was conclusive of the nature of the case. He related a case of genuine hæmato-salpinx without gestation which occurred in a young girl. There was an imperforate os uteri, and after operation a large quantity of retained menstrual fluid of the usual character was evacuated. Three days later the patient died collapsed, and there was found hæmato-salpinx on both sides and one of the tubes had ruptured. These collections of blood in the tubes were quite shut off from the uterine cavity.

Dr. GRIFFITH confined himself to a criticism of small details. He said that Mr. Sutton formerly thought that the hæmorrhage which produced the mole produced the rupture. He (Dr. Griffith) asked him if he still held to this opinion. As to the mode of closure of the tube, a different explanation to that put forward by Mr. Sutton had recently been published in the *Edinburgh Medical Journal*, the longitudinal muscle fibres of the tube being held to be the effective agents in drawing the fimbriæ within the oviduct. Mr. Sutton had not referred to that variety of hæmato-salpinx caused by hæmorrhage from the mucous membrane of the tube itself. Dr. Griffith believed that regurgitation from the uterus was a very rare thing, the canal of communication between the uterus and the tube being very minute and of great length. Such regurgitation could only occur after very great distension of the uterus. He asked Mr. Sutton how he arrived at a positive diagnosis of the sixth or eighth week of pregnancy. Dr. Griffith held that the villi formed part of the fœtus, and it was extremely unlikely that they would grow after the death of the ovum. It was a remarkable thing that an extra-uterine fœtation could go on to term, and that a proper blood-supply should be forthcoming in the absence of the maternal sinuses. He agreed that villi were not difficult to detect, but he had, as a rule, only observed one layer of short cubical epithelium upon them.

Dr. SUTTON, in reply, said that the main object of his paper was to give a careful account of these specimens so that others might be familiar with their external characteristics. After abortion or rupture of the tube the closure of the ostium would be deferred. He thought that the case related by Dr. Lewers was probably a hæmatoma produced by rupture of the gestation sac between the layers of the broad ligament. The dates of pregnancy he had given were approximate and were reckoned from the last period. He had examined a specimen of a well-formed mole in a tube without rupture and this had led him to modify his former belief on this subject. After the embryo died he felt sure there was no continued growth of the villi.

Mr. SHEILD showed a boy from whom, some time ago, he had removed the entire gracilis femoris muscle on account of a large pear-shaped tumour, which reached from the pelvis to the knee, and which he regarded as of congenital origin. A committee of the Pathological Society determined the growth to be a myxo-sarcoma. There was at present a small recurrence at the upper end of the thigh.

The PRESIDENT exhibited a series of interesting drawings, which he had borrowed, for the purpose of copying, from the museum of the Dublin College of Surgeons.

PROVINCIAL MEDICAL SOCIETIES.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this Society was held on Nov. 1st, J. H. Bell, M.D., President, in the chair.—Dr. T. WHITESIDE HIME read a paper on his personal experiences of the cholera in Hamburg. The population of the affected area he computed as about 620,000, in which there were 18,000 attacks in six weeks and at the worst 1136 in one day. All arrangements, as, for instance, in regard to the disposal of the dead, were bound to break down under such pressure. On analysis the composition of the drinking water of Hamburg is found to be similar to, but about six times as concentrated as, the sewage effluent of Bradford or Leeds. The treatment by transfusion of a litre and a half of normal saline solution gave most astonishing results; and drugs, especially morphia, being more harmful than useful, calomel was given in minute doses, and hot tea and coffee as stimulants. Personally, if in cholera, Dr. Hime would like perfect rest, transfusion of a pint of normal saline extended over three-quarters of an hour, and then hot alcoholic drinks. There is no characteristic lesion found after death; the kidneys are dusky or livid, and the lungs generally collapsed and full of infarcts. With regard to etiology, cholera will spare one place and attack another, which appears similar in regard to filth and unwholesomeness. It is found to avoid places on impervious granite or clay and to prevail on porous soils. The river has been lower in Hamburg this season than ever recorded. A prevailing epidemic of cholerine is found to be true cholera by the presence of the comma bacillus; at first the cases are mild, later the disease increases in intensity. The water theory does not hold in the case of Hamburg, where the disease behaved as in a town with good water-supply, spreading from the poor and then to the rich.—After a short discussion by two or three of the members exhibits of a collection of pathological specimens from the Hamburg hospitals, and a number of histological preparations were made by Dr. Hime.

PLYMOUTH MEDICAL SOCIETY.—The opening meeting of the winter session 1892–93 was held under the presidency of Mr. Leah (Stonehouse) on Oct. 15th, in the Society's new library, Athenæum Chambers, and was devoted to the exhibition of cases and specimens.—Mr. PAUL SWAIN showed a woman aged twenty-two on whom he had operated five weeks before for the relief of Ankylosis of the Lower Jaw following scarlatinal arthritis. Tenotomy of the temporo-maxillary capsules had twice been performed in 1881, but with no permanent benefit. A triangle of bone was removed subperiosteally from each maxillary angle, an operation Mr. Swain believed to be the first on record of simultaneous removal on the two sides. The lower jaw had become arrested in development, the lower dental arch lying inside the upper, so that the teeth could not be separated. The mouth could now be opened one inch and a quarter and the patient masticated fairly.—Mr. LUCY showed a boy aged four on whom he had performed Macewen's radical cure for Inguinal Hernia eight months previously.—Mr. E. SQUARE exhibited a case of Double Facial Paralysis, probably syphilitic in origin.—Mr. BEAN brought forward a man aged sixty-two with Epithelioma of the Floor of the Mouth of six months' duration, with huge secondary growths in the upper cervical glands of the left side.—Mr. SWAIN showed a specimen of Fæcal Fistula which he had removed by Treves' operation, and reported that the result was very successful.—Mr. R. S. THOMAS showed the Bladder from a woman of fifty-two in which the trigone was the seat of a large epithelioma blocking the ureteral orifices, causing dilatation of ureters and renal pelves, with subsequent suppression of urine, uræmic coma and death.—Mr. WOOLLCOMBE exhibited (1) an Intestinal Collection of Cherry-stones and Straw removed by enterotomy; (2) a specimen of Meckel's Diverticulum having a free, rounded extremity.—Mr. BULTEEL showed an Ovarian Tumour recently removed successfully; and Mr. F. ROW handed round a photograph of a case of Ectopion Vesicæ.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of the Society was held on Oct. 27th, the President, Simeon Snell, F.R.C.S.Ed., in the chair.—Mr. SNELL introduced the following patients:—(1) A lad of nineteen, with extensive destruction of the face from Lupus. The right eye had been completely destroyed and the left was seriously implicated. (2) A child two and a half years of age, with a Chancre on the Left Upper Eyelid. (3) A baby with a small Nævus of the Orbit, and a young woman with a Nævus of the Plica Semilunaris of the Eyelid.—Mr. MAKEIG JONES (Wath) showed a married woman aged thirty-one with Exophthalmic Goitre who had consulted him four months ago for failing eyesight. He then found double optic neuritis and tremors of the right hand and arm. The right leg and the left arm were now affected by tremors, and there was paralysis of the right facial and right sixth nerve. Intense paroxysmal headache accompanied by vomiting was complained of.—Dr. GWYNNE showed a woman aged fifty-four suffering from Chronic Bright's Disease, who for a year and a half had well-marked albuminuric retinitis.—Mr. DALE JAMES showed the patient who was the subject of the paper on an "Unusual Case of Tuberculosis of the Skin" in the *Sheffield Medical Journal*. The disease had existed for nearly five years and had resisted very varied treatment, the diagnosis being doubtful. Since the publication of the case tubercle bacilli had been found in a nodule excised from below the knee.—Mr. DALE JAMES demonstrated his method of using Pick's zinc gelatine for threatened bedsores. The harder preparation was the one preferred. It could be removed by a hot sponge and replaced once in twenty-four hours.—Mr. MAKEIG JONES showed larvæ of a blow-fly which had been passed alive per anum by a patient. According to Dr. Beale larvæ of various blow-flies may pass

through the whole length of the alimentary canal in a living state.—Dr. BURGESS showed a suppurating hydatid cyst of the liver which had perforated the diaphragm, invaded the right lung and discharged its contents through a bronchus.—Mr. RICHARD FAVELL related a case of obstructed labour caused by fibroids of the uterus being engorged in the pelvic canal.

MIDLAND MEDICAL SOCIETY.—Mr. HASLAM, F.R.C.S., presided at the meeting of this Society on Oct. 19th.—Dr. G. H. MELSON showed a patient suffering from partial loss of urinary and rectal control, with increase of patellar and plantar reflexes, most marked on the right side where ankle clonus was also well developed. With this was paresis of the lower extremities leading to an equine character of gait, and the patient also exhibited the signs of general incoördination. There was a well-marked history of syphilis ten years previously, and the present condition dated back altogether for eight years, many of the earlier sensory disturbances having cleared up almost completely.—Mr. HASLAM showed a large Sebaceous Horn that he had removed from the scalp of a woman aged fifty-six. It had been growing for six years, and measured along its curves eight inches and a-quarter, the greatest circumference was two inches and one-eighth, and the weight 480 grains.—Dr. MALINS showed:—1. A Fibroid Tumour occupying the body of the uterus removed by hysterectomy on Sept. 20th. 2. The Right Ovary and Fallopian Tube from a case of abdominal section. 3. A Unilocular Cyst of the Left Ovary. Patient aged forty-one, married, three children, youngest thirteen years.—Mr. HEATON showed an Aural Polypus, which he had removed by means of the galvano-cautery from a patient aged sixty, in whom it had been growing for eighteen years. The interest of the polypus lay in its size.—Dr. FOXWELL then read a paper on the Climatic Treatment of Pulmonary Phthisis.

MANCHESTER MEDICAL SOCIETY.—At the meeting of this Society, held on Nov. 2nd, when A. W. Stokes, M.R.C.S., presided, Mr. T. JONES gave the clinical history of three cases of Nephro-lithotomy, all terminating in recovery.—Mr. SOUTHAM mentioned two cases where Nephrotomy was performed for conditions attended by symptoms which closely resembled those of renal calculus, but in neither instance was a stone found. In one case the kidney was much contracted with an irregularly lobulated surface; in the other, where the symptoms developed shortly after an injury to the loin, it appeared to be in a healthy condition. In both cases the exploration of the kidney was followed by a complete subsidence of all the symptoms which were complained of previously to the operation.—Mr. WHITEHEAD gave particulars of three cases of Nephro-lithotomy. Two of them made rapid and complete recoveries; the third, some weeks after returning home convalescent, had a sudden attack of pain in the region of the kidney operated upon; an abscess developed and a sinus persisted many weeks, but eventually closed satisfactorily, and the patient had no further trouble.—Mr. G. A. WRIGHT made some remarks upon the surgical treatment of Hydro-nephrosis.—Dr. A. T. WILKINSON made some remarks on the bearing of Renal Disease upon the mortality of surgical operations. It appeared that in 26 per cent. only of the cases were the kidneys found healthy.

NORWICH MEDICO-CHIRURGICAL SOCIETY.—On Nov. 1st a large number of the members, having accepted the hospitality of the President (A. R. Manby, M.D.), were entertained at luncheon previously to the meeting to meet Sir Frederic Bateman and to congratulate him on the distinguished honour of knighthood so recently conferred upon him by Her Majesty the Queen.—The retrospective address was given by Dr. H. MCCLURE.—Mr. CADGE read a communication from Sir Joseph Lister and ably advocated the claims of the proposed British Institute for Preventive Medicine.—Dr. BARNES (London) and other members of the Society took part in the discussion and it was decided to refer the matter to the Council for further consideration.—Dr. S. J. TAYLOR showed a boy suffering from Ectropion caused by a heloid growth of a scar following a burn of the face; and Mr. T. H. MORSE showed two specimens of Extra-uterine Fœtation removed by Abdominal Section.

PRIZE FOR A HUNGARIAN MEDICAL ESSAY.—The Budapest Medical Society offers a prize of a thousand gulden for the best work published next year in the Hungarian language on any subject connected with anatomy, physiology, histology, or experimental pathology.

Reviews and Notices of Books.

Diseases of the Eye: a Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, Professor of Diseases of the Eye in the Philadelphia Polyclinic. With 216 Illustrations and 2 Chromo-lithographic Plates. Pp. 641. Philadelphia: W. B. Saunders. 1892.

THIS work has been written by an accomplished surgeon who has had the advantage of the experience afforded by a large hospital, and has had the responsibility of the chapters on general optical principles and refraction taken from his hands by Dr. James Wallace, and of the section on Retinoscopy by Dr. Edward Jackson, the former of whom is the chief of the Eye Dispensary of the University Hospital, whilst the latter is the Professor of Ophthalmology in the Philadelphia Polyclinic. As a whole it corresponds to the works in this country of Berry, Juler and Swanzy. It is nicely got up, the print is good and the illustrations fair. Its chief defect is the absence of pathology. Even in the case of the diseases of the cornea, the pathological characters are very curtly dismissed. In passing we may just remark that Dr. De Schweinitz, in speaking of plastic operations on the cornea, is incorrect in stating (p. 278) that von Hippel is the originator of the proceeding of transplanting the cornea of the rabbit for the relief of dense central opacities. In reality, it was Himly to whom the merit is due, for as long ago as 1813 he proposed the operation, and it was practised by Heusinger in 1824, and shown by Thomé in 1834 to be feasible in animals.

The language is sometimes a little stilted, as when, in speaking of the pain in acute glaucoma, the author describes it as a "severe neuralgia of the trigeminal distribution," and in the next sentence remarks that in subacute attacks there is "a less marked similarly located pain"; a few pages further on he speaks of an operation as "entirely classical in its technique." He remarks that some difference of opinion exists in regard to whether the eye should be bandaged or not after iridectomy in glaucoma, and pronounces decidedly in favour of the application of a bandage, which he thinks should be applied for the first few days not only to the eye which has been operated upon, but also to the fellow eye, whilst the bandage that has been placed upon the affected organ should remain there until complete restoration of the anterior chamber has taken place by healing of the wound. He adds, it is a "wise precaution to instil eserine into the eye which has not been operated upon during the course of the treatment."

The subject of glaucoma is, however, carefully and fully given; the usual divisions of acute, subacute, chronic, secondary hæmorrhagic, and complicated glaucoma are each described. The various theories of the etiology of the disease—as those of von Graefe, Donders, Knies and Weber, Priestley Smith, Laqueur and Brailey—are all briefly discussed and their value estimated. This is as it should be, for, with the exception of purulent ophthalmia, there is probably no single disease of the eye which it is more important that the general practitioner should be competent to diagnose and treat.

In considering the treatment of cataract Dr. De Schweinitz mentions, whilst he cautiously abstains from recommending, the artificial ripening of cataract. The account of the operation for extraction is well given, and as the details include iridectomy we suppose that the author prefers that method, though, as he observes, many operators in America as well as in this country are disposed to omit that proceeding unless special circumstances call for its execution. The subject of refraction generally and the account of astigmatism in particular, together with the mode of relieving it by glasses, are very well done, and the following may be taken as

an example :—"The combination of a convex spherical lens with a concave cylindrical lens has the following effect :—In the direction parallel to the axis of the cylinder the combination equals the full refraction of the spherical ; in the direction at right angles to the axis of the cylinder the refraction is equal to the difference between the two lenses. If the convex spherical is stronger than the concave cylinder the difference is still represented by a convex glass. For example, + 2 D spherical c − 1·50 D cylinder axis 180° = + 0·50 D spherical c + 1·50 D cylinder axis 90°, because + 2 D in the meridian of 180° is not diminished, but in the meridian of 90° it is reduced to + 0·50°. Now + 0·50 D spher. produces this amount of refraction at 90° and supplies + 0·50 D of the requisite + 2 D at 180°, leaving + 1·50 D to be supplemented by a cylindrical lens with its axis at 90°. In place of writing + 2 D spher. c − 1·50 D cyl. axis 180°, a more simple expression would be + 0·50 D spher. c + 1·50 D cylinder axis 90°"; and then the case when the concave cylindrical lens is stronger than the convex spherical is considered. The chapter on operations might with advantage be extended. The practitioner who had never seen the operation performed would hardly be able to undertake the operation of tenotomy from the instructions here given ; whilst in regard to readjustment Swanzy's method is alone intelligibly given ; Prince's and Schweigger's methods, though mentioned, are too briefly described to be of any service. In conclusion, we may observe that Dr. Schweinitz's treatise is very reliable, and may be consulted with advantage both by the general practitioner and the ophthalmic surgeon, whilst it will prove a very useful book to the student.

Garden Design and Architects' Gardens. Two Reviews Illustrated, to show, by Actual Examples from British Gardens, that Clipping and Aligning Trees to make them Harmonise with Architecture is Barbarous, Needless and Inartistic. By W. ROBINSON, F.L.S. London : John Murray.

IN these days, when public parks and open spaces are felt to be necessities for dwellers in towns, Mr. Robinson's little book will possess an interest for many who frequent them and who may thus gain some insight into the mysteries of landscape gardening, from which they were formerly in a large measure debarred. Everyone cannot own country seats or extensive grounds, but anyone can admire and enjoy beautiful gardening in public places. Mr. Robinson speaks strongly of the "false" and "inartistic" treatment of trees, which are often clipped and shaped in various fashions without any valid reason. He also deplores the sacrifice of many lawns and stretches of turf which are cut up into geometrical shapes, leaving no room for a broad and comprehensive effect, or for the use of games or enjoyment. The book is full of beautiful illustrations taken from some of the most noted gardens in England and elsewhere. The author complains that the work of the landscape gardener is often more like that of an engineer than of a keen student and lover of nature. The book is clearly written, and should be readable even to those who know little about gardening as an art.

Dictionary of National Biography. Edited by SIDNEY LEE. Vol. XXXIX.—Lambe–Leigh. London : Smith, Elder and Co.

THE publishers of this elaborate work are to be congratulated on the promptness with which each succeeding volume is put before the public. We do not in this place attempt anything like criticism of the merits of this biography. This must be reserved until the completion of the work. Meanwhile it may be interesting to recall a few incidents in the lives of medical men whose names occur in the volume just issued.

Brown Langrish, M.D., F.R.S., who died in 1759, was an author of some distinction. His writings included a work entitled "The Modern Theory and Practice of Physic," and another on "Physical Experiments on Brutes"—experiments undertaken in order to devise "a safe and easy method of dissolving stone in the bladder." The Croonian Lectures on Muscular Motion were delivered by him before the Royal Society in 1747.—Christopher Langton, M.D. Camb., who died in 1578, published a book with the quaint title, "A Very Briefe Treatise orderly declaring the Principal Partes of Physick—that is to say, thynges naturall, thynges not naturall, thynges agaynst nature." Langton appears to have been a man of considerable intelligence, but somewhat deficient in moral stamina.—The name of Dr. Edwin Lankester, who was born in 1814 and died in 1874, comes next, and deserves a somewhat fuller notice than that given to either of the above. Originally intended for the career of an artificer, his taste led him subsequently to seek access to the medical profession, and as surgical assistant he entered the service of Mr. Stanisland of Fareham. In that position, however, he did not long remain. He felt himself in the possession of abilities equal to a more distinguished *rôle*. Accordingly, having entered a medical course in the London University, he pursued with ardour the studies fitting him for his future work until he was enabled succesfully to compete for the qualifications M.R.C.S., L.S.A. Repairing to Heildelberg, he obtained the M.D. degree, and afterwards settled in London, and supported himself by literary work, popular lectures and such practice as fell in his way. On the death of Mr. Wakley, M.P., Dr. Lankester was elected, after an exciting contest, to the Middlesex coronership, a post the functions connected with which his predecessor had done so much to exalt in public estimation, and into whose labours Dr. Lankester entered with enthusiasm. His contributions to science by both tongue and pen were of no mean order.—Several celebrities of distinction owning the name of Latham figure in this volume.—Dr. John Latham (1761–1843) studied medicine at St. Bartholomew's Hospital, and began practice in Manchester, but soon removed to Oxford, where he became physician to the Radcliffe Infirmary. Afterwards he came to London and was elected physician to the Middlesex Hospital. In 1795 he was appointed Physician Extraordinary to the Prince of Wales. He delivered the Gulstonian Lectures in 1793, the Croonian in 1795, and occupied the presidential chair from 1813 to 1819 inclusive. He was a voluminous writer.—Dr. Peter Mere Latham, son of the above, was quite as distinguished as his father, though his reputation as a physician does not seem to have attracted so large a *clientèle*. His clinical teaching was regarded as excellent, and his writings (especially his Lectures on Clinical Medicine, comprising diseases of the heart, which for long will remain a standard work) are not likely to pass into oblivion. He was appointed Physician Extraordinary to the Queen in 1837.—Robert Gordon Latham, M.D. (1812-1888) is chiefly known as an ethnologist and philologist, and as the editor of Johnson's Dictionary. He was formerly lecturer on Materia Medica at the Middlesex Hospital, but in 1849 he abandoned medicine in favour of his ethnological studies.—Of Dr. Thomas Lawrence, who occupied the position of President of the Royal College of Physicians in 1711—1783, there is not much to be said. He appears to have been noted chiefly for the writing of elegant Latin and as the author of the Life of Harvey, prefixed to the College edition of his Opera Omnia, for which Lawrence received £100.—Sir William Lawrence, F.R.S., the famous surgeon of St. Bartholomew's Hospital (1783–1867) demands a somewhat more detailed notice. His professional career commenced by Abernethy appointing him his demonstrator of anatomy. After his admission to the Royal College of Surgeons he became assistant surgeon to St. Bartholomew's Hospital, to the full surgeoncy of which institution he was appointed in 1824, an office he held for forty-one years. His lectures, delivered at the College of

Surgeons, on Comparative Anatomy and Physiology roused at the time of their publication a good deal of odium, and Lord Eldon refused an injunction to protect the rights of the author on the ground that they contradicted the Scriptures. Those times have now happily passed away. Lawrence was described by his contemporaries as an admirable lecturer and clinical teacher. His commanding presence, great experience and sagacity made him venerated not in medical circles alone, but in society generally. A notice of his life would not be complete without a reference to his attack on the management of the College of Surgeons, an opposition which, however, says his biographer, was afterwards warded off by the Council electing him a member of their board.—Of John Leake, M.D. (1729–1792), little need be said, and that little seems to be not of a highly reputable kind. He described a new kind of forceps having three blades instead of two, but the device was not received with favour by the more experienced obstetricians. He published some works on diseases of women, but addressed his remarks in two instances, at least, not to physicians, but to women themselves.—Arthur Leared, M.D., born in Wexford in 1822, obtained his doctorate in Trinity College, and, having practised for a short time in the above-mentionod town went to India, where, however, his health did not permit him to remain. Dr. Leared diligently improved the opportunities afforded him by travel, and, being apt in the acquisition of foreign languages, managed to obtain very wide culture. His society was therefore much sought after by the learned and artistic. His writings were numerous, the most important of them being perhaps his treatise on "Imperfect Digestion" and on the "Sounds caused by the Circulation of the Blood." He died in 1876.—Edwin Lee, M.D. Gött., entered the profession as an articled pupil of the Royal College of Surgeons of England and became a member of the medical staff of St. George's Hospital in 1824. His chief strictly professional subject was lithotrity, for which he gained the Jacksonian prize. He resided much abroad, and was best known for his numerous handbooks of continental travel.—Another physician of the same name (Robert Lee, M.D.), an obstetrician of great eminence, must be mentioned. His life was embittered by the disregard paid by his contemporaries to his discoveries of the nerves of the uterus, the reality of which, as described by him, was disputed by other distinguished anatomists. A long list of papers and memoirs bearing on kindred subjects was published in THE LANCET of March 22nd, 1851. That Robert Lee was an able anatomist cannot be questioned, but whether all his conclusions and observations will survive the results of further research must await the verdict of posterity. His preparations and specimens are now lodged in the museum of Cambridge University.

Glanders: How it Arises and Spreads &c. By W. HUNTING, F.R.C.V.S. London: H. & W. Brown. 1892.

IN a sixpenny pamphlet Mr. Hunting attempts to deal in a popular manner with the subject of glanders, which has occupied a fair share of attention lately. There is, of course, nothing new in his statements or proposals so far as sanitary measures are concerned, neither is there anything to interest the pathologist in the few pages devoted to the consideration of the causes and symptoms of the malady. The author ascribes the prevalence of the disorder to ignorance on the part of horse owners, but surely his long experience must have taught him that in a large number of instances in which diseased horses were kept alive for days, weeks, and even months together, and even worked when there was small chance of detection, the owner was perfectly cognisant of its existence. In the large studs of horses which are infected in London the nature and symptoms of the disease are well known to the proprietors, and yet there is often hesitation in reporting cases. It is proposed to give compensation for the slaughter of diseased horses in order to induce owners to notify its existence and obviate concealment. If its prevalence is due to ignorance, then compensation would not do much towards revealing it. Indeed, the author gives striking instances adverse to his statement, especially when treating of compensation. It is satisfactory to note that the writer does not believe in the curability of farcy, though we believe he has asserted elsewhere that a farcied horse could be permanently cured. Infection through the medium of the atmosphere he denies, because the glanders poison, he states, is not volatile; yet he admits that the lungs are always affected in developed cases. Some of the best authorities are of opinion that, under certain circumstances, glanders may be communicated through the atmosphere, as in hot, foul stables, and on the main and lower decks of ships when the temperature is high, as when the hatches are battened down. It would therefore not be wise to neglect this probable cause of spread under all circumstances. Mr. Hunting does not attach much importance to the danger usually ascribed to public drinking troughs, though he does not quite deny the possibility of infection sometimes occurring in this way. He says that "tramway, omnibus and cab horses suffer most from glanders, and yet the majority of these animals never approach a public trough. Small carters and carriers are the greatest patrons, and they hardly ever suffer from glanders amongst their horses." It is true that tramway and omnibus horses do not drink at these troughs, but they do so at those of their own establishments; cabdrivers, however, largely avail themselves of the public troughs, and there is much evidence—that of the Brown Institute, for instance,—to show that the horses of small owners very often suffer from the disease.

With many of the author's statements we must disagree, so far as getting rid of the disorder is concerned. He remarks, for example, that he would expect the virus to lose its potency in a damp stable in a few days; and that he does not believe it will remain active, even in a dry form, for more than six weeks. We can call to mind a very serious outbreak among horses in the east of London, due to putting them into an old wooden, badly ventilated, and worse lighted stable which had been shut up for more than twelve months, and which had been disused during that time because many cab-horses had perished in it from glanders. Another serious mistake we consider the author makes is with regard to the floors of infected stables, which he believes to be the least worthy of notice. "The worse the flooring, the more moisture and decomposing matter we find on it and in it, and these conditions are themselves inimical to the preservation of glanderous poison." Such a statement will not, we feel confident, receive the countenance of anyone who has had to deal with the disease for any length of time, and we should be sorry to act upon it if we were called upon to stamp out an outbreak.

There are many other remarks to which exception could be taken, but we have said sufficient to show that some of the opinions expressed are not quite in harmony with those of others who have had experience of glanders. Indeed, had the pamphlet not been intended for the general public we should not have felt ourselves justified in giving it such a lengthy notice. But as the author is the veterinary inspector for Westminster and Chelsea any statements he may make might be accepted as indisputable and perfectly reliable, and in this way lead to serious mischief if they were not so. The author is also not quite up to date, though the *brochure* was recently issued—the preface is dated September of this year. Among other things there is no mention whatever of mallein as an aid to diagnosis, though that valuable substance was in use more than a year ago.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 12, 1892.

THERE is probably no better criterion of the state of medical science and of the medical profession of a country than is supplied in the proceedings and the discussions of its medical congresses. This is as true of a colony as of the mother country. We have lately had the opportunity of applying this test to our Australasian colonies, so far as such proceedings and discussions can be judged by newspaper reports. It is gratifying to be able to say that, judging from this test, the profession in our Australasian colonies will bear a favourable comparison with the profession at home. The third session of the Congress opened in Sydney on Monday, Sept. 26th, at 11 A.M., in the Great Hall of the University, and it must have been an imposing event. The Australasian colonies number, we suppose, about 4,500,000 subjects, without counting the aborigines. The roll of the Congress numbered 534 members, drawn almost entirely from the colonies themselves. This is no bad muster in itself for a population about equal to that of London. It is interesting to know the contribution to it of the several colonies: Sydney itself sent 208; New South Wales, outside Sydney, 111; Victoria, 131; South Australia, 39; Queensland, 32; New Zealand, 12; Tasmania, 11; and Samoa, 1. One more was supplied by New York. The Congress received full recognition of its importance by the presence of the Governor, the Earl of JERSEY, and the Premier, Sir GEORGE DIBBS, K.C.M.G. Both these distinguished men gave a hearty welcome to the Congress, and the Premier enumerated various measures in sanitary legislation which he had promoted and others which he had in contemplation, mentioning that Dr. MCLAURIN, now in England, was authorised by him to gather all information in Europe that would help in a comprehensive Health Act. The Governor entertained the Congress at a garden party at the Government House, and nothing indeed was wanting in the way of hospitality, and excursions, scenery and weather, and general good humour to give dignity and effect to the Congress, which reflected the highest credit on all concerned. A little point was raised at an evening meeting as to the mode of electing the executive in such congresses. The mover of a resolution, in itself reasonable enough and supported in a temperate speech, did not succeed in carrying it. It is always wise in such arrangements to consult as much as possible the general feeling of the profession of the district which is to receive and entertain the Congress. But there are various ways of doing this, and it does not seem to have been left undone in the present instance, if done somewhat differently from the way suggested by Mr. TARRANT. Excepting this incident the proceedings were of a most satisfactory character. So much internal harmony and so much hospitality from the representatives of the State go far in themselves to justify the Congress and are a sufficient reason for such gatherings; but the justification is greatly strengthened in this instance by the nature of the proceedings. The address of the President—Dr. P. SYDNEY JONES—was in admirable taste and spirit. It consisted of an exposition of the progress of medicine during the past forty years, the period covered by Dr. JONES's own experience since he began the study of medicine at University College. It was meant to rebuke and remove that spirit of doubt and scepticism as to the progress of medicine which so many minds seemed to cultivate, and very ably did the President establish his contention that the progress of both medicine and surgery in this period had been simply marvellous. No part of the great subject was omitted—from anatomy to pathology, from the treatment of wounds to the latest improvement in pharmacy, from cases showing the cure of tuberculosis to the achievements of preventive medicine. In the various sections there was the same proof of progress in the interest taken in every branch of medical work. We publish elsewhere an abstract of the proceedings. In the Surgical Section cases were read which illustrated the most brilliant triumphs of careful operation guided by the latest helps of advanced physiology. One case of excision of the pylorus for scirrhus, extending two inches into the duodenum, was exhibited, in which the patient, after two years, was in perfect health. Tracheotomy in diphtheria was reported as successful in fifty of one set of 120 cases, and ten of another set of thirteen. In some of the sections only half the cases could be read. Important discussions were opened on the subject of anæsthetics.

We cannot pretend to even mention the many valuable contributions in all the Sections. From our abstract elsewhere our readers will see that the lights of medicine burn brightly in the Australasian colonies. We receive occasionally discouraging reports of professional methods and manners from these colonies, but we are reassured by the Congress and convinced that the high character and aims of the profession are well sustained in Australasia.

FROM the reformer's point of view the proceedings at the ninth annual general meeting of Fellows and Members of the Royal College of Surgeons of England, held on the 3rd inst., may be regarded with satisfaction and complacency. A few skirmishes enlivened speeches which were inordinately long, and dull withal at times, but there was no very serious antagonism between the militant Members present at the meeting and the authority of the President, who occupied the chair. Having given a fair and useful summary of the report which had been placed in the hands of the Fellows and Members, the President desired the assistant secretary to read the following resolution, of which notice had been given by Mr. LAWSON TAIT and Mr. NELSON HARDY: "That this meeting of the College of Surgeons of England is of opinion that the report now presented is ineffective and incomplete, and this meeting is further of opinion that the ancient attitude of hostility on the part of the Council to the true interests of the body corporate of the College ought to terminate, and that the repeated resolutions passed at former meetings of the College should be carried into effect."

This resolution had already been before the President, and had received his sanction after it had been amended by Mr. LAWSON TAIT, at his request, by the excision of words referring the report back to the Council. The resolution was therefore strictly in order, and on several grounds it would have been better to allow Mr. TAIT to proceed and to hear

what he had to say before making any comment. The President, however, intervened between Mr. TAIT and the motion by suggesting that he should divide his motion, characterising it generally as offensive, and throwing out a hint to the meeting that it should not be put or even discussed, and, failing this resource, he proceeded to rule that the resolution *must* be divided. This ruling Mr. TAIT accepted under protest, saying "he knew of no meeting conducted in such an extraordinary fashion as this. He had never heard a chairman argue a resolution before the opener had spoken, and he had never heard of any business body in the world beginning a meeting as this meeting had begun. The resolution had been accepted in the course of correspondence, and if it was now to be amended he considered that there had been a breach of bargain." He then addressed himself to the first clause of the original resolution, that the report was ineffective and incomplete, referring to the exclusion of the Society of Apothecaries from all consideration in the scheme for the five years' curriculum, to what he considered to be defects in the scheme itself, to the want of consultation of the body corporate of the College in regard to the proposed new University for London, to the want of full information in regard to the extraordinary expenditure at the College and to some minor defects and omissions. In seconding the motion Mr. NELSON HARDY specified a misprint in the report which would go down to posterity and made an effective point out of the fact that throughout the whole of the report the words "Council" and "College" were used in such a way as to lead the reader very often to believe that the Council was the College, or, on the other hand, that the College was the Council. Both Mr. HARDY and Dr. DANFORD THOMAS dwelt on the ineffective and incomplete replies received from the Council in answer to the resolutions passed by the Fellows and Members for many years. Mr. GEORGE BROWN having supported the resolution and Mr. CRAVEN and Surgeon-Colonel INCE having spoken against it, Mr. HOLMES expressed a feeling prevalent at the meeting that, as the constitution of the College stood, the report was a very satisfactory one, and he regretted that the report which had been drawn up in a spirit very friendly to the Members and Fellows should be spoken of in terms which he could not help regarding as somewhat disparaging. The intervention of Mr. HOLMES, who was warmly cheered on rising, secured the defeat of the first part of the resolution, that the report was ineffective and incomplete; and we believe that if the President had not insisted on the resolution being divided the resolution as a whole would not have been carried, because those who disapproved of the first part of the resolution—the majority of the meeting—would have abstained from voting for a resolution weighted by a clause with which they could not concur. The moment, however, the incubus was removed the latter part of the resolution, moved by Mr. LAWSON TAIT and seconded by Dr. ALDERSON, regained its elasticity, and, notwithstanding the appeals of Surgeon-Colonel INCE and the President of the College, was carried by a large majority. We agree, however, so far with the President that this resolution might have been expressed in language less open to exception as apparently offensive: for whatever opposition the Council has offered to enfranchisement and representation of the Members of the College has been due at least to a conviction that measures of this kind would not be for the welfare of the College, which they have regarded too exclusively as a scientific body; and in this the Council have been supported strongly by the main body of the Fellows, who have regarded the pretensions of the Members with disapproval and apprehension. The Council must of necessity reflect the opinions of the constituency who elect it, and therefore it is that if justice is ever done to the Members it must come in the first instance not from the Council, but from the Fellows themselves. Many of the Fellows are already convinced of the expediency of making concessions to the Members of the College, and in proportion to the increase of privileges granted to the Fellows and to the open discussion of collegiate affairs at meetings of the Fellows summoned by the Council will be the growth of liberal opinion in their ranks. We are not sure that the Members of the College are fully convinced of this, for immediately after Mr. LAWSON TAIT'S motions had been disposed of there was a large exodus of Members from the general meeting before the resolutions promoted by the Association of Fellows came on for discussion. It is gratifying, however, to be able to record that both of these resolutions were almost unanimously passed. On the motion of Mr. HOLMES and Dr. DANFORD THOMAS the meeting thanked the Council of the College for acceding to their wishes in the matters (*a*) of separate meetings of Fellows and Members, and (*b*) of the provision of a common room in the College. Mr. HOLMES pointed out most appositely the great importance attached to separate meetings of the Fellows by those who had urged them on the Council, because they had strong opinions as to the undesirability of maintaining the present constitution of the College, and as to the desirability of some modifications of the Charter, and because the opinions of the Fellows generally both on these points and on the claims of the Members would be obtained in a manner more satisfactory than had been done by a paper which the Council had circulated some years since. Curiously enough, Mr. LAWSON TAIT was the only person who held up his hand against the motion. The last resolution, moved by Mr. GANT and seconded by Mr. JOSEPH SMITH, ran as follows: "That this meeting of Fellows and Members again wishes to impress upon the Council that it is absolutely essential for the welfare of the College that the Fellows and Members should be consulted before any change is made in the constitution and external relations of the College and before the College is committed to any extraordinary expenditure on buildings or otherwise."

It will be noted that there are three different things specified in the resolution as to which the expediency of consulting the Fellows and Members is insisted on: changes in the constitution which can only be effected by Charters and By-laws, the external relations of the College—such as those with the College of Physicians, Universities and the Apothecaries' Society—and extraordinary expenditure. The President appeared anxious to set aside the resolution on the ground that consultation in regard to larger questions had been admitted by the Council in an answer in 1885 to certain resolutions passed by the Fellows and Members. But such larger questions included some only of the points raised in the third resolution, and an admission of the principle by the Council in the form in which it is embodied is by no

means sufficient to bind the Council hereafter. Moreover Mr. LAWSON TAIT hit the nail on the head when he remarked that he had seen little disposition in the Council since that memorandum was issued in 1885 to take advantage of this resolution. Hence it is of the greatest moment to the cause of collegiate reform that the principles laid down in the third resolution should have been reaffirmed at a general meeting and have elicited from the President of the College a statement that the Council recognised the justice of the principles and intended to act upon them. We shall look with the greatest interest for the answers which the Council will give to the resolutions passed at the ninth annual general meeting of Fellows and Members, and by these answers the progress of the reform movement may in all probability be most accurately gauged.

THE second of a series of articles in *The Times*, dated Nov. 4th, on the subject of "English Ports and the Cholera," revives a question to which most people thought *The Times* had itself in previous articles, and notably in those of Aug. 27th, Sept. 3rd and 24th, given its death-blow—namely, that of maritime quarantine against cholera. The writer having dealt with defects in our ports, which are, we fear, but too abundant, goes on to refer to the reiterated demand for quarantine. He states that, to most of us, arguing about quarantine seems like flogging a dead horse; but having given it as his opinion that "it is not dead yet," he further declares that the demand for it "is not so foolish as it looks." He also points out that the request of certain authorities is that in the case of ships making short voyages of from thirty to fifty hours they should "be isolated for a couple of days so as to give cholera time to show and so prevent its introduction ashore." It is true that he adds that we have abandoned quarantine for good and that "no more need be said about it," but unfortunately the little he has said is to declare that for England the system is not so foolish as it looks, and the authority of *The Times* for such a statement is one that will certainly be utilised both at home and abroad in antagonism to the views which have been enunciated for some forty years past on the part of the British Government, and which have recently been renewed with a decision that leaves little to desire.

The suggestion which the special correspondent of *The Times* does not regard as foolish is that as respects ships from infected ports, and on which "no one is visibly ill," a detention of forty-eight hours should be added to a fifty hours' sea voyage, making four days in all between leaving the infected port and permission to land in an English port. Is this different in principle from the "five days' quarantine" which foreign nations imposed on our shipping when cholera was present in several of our ports a little more than a month ago and which *The Times* then declared to be "a crowning absurdity"? Cholera prevailed close to Boulogne a short time since; it may at any moment next year prevail in ports such as Boulogne, Calais and Dieppe. Does the writer of the recent article propose that notwithstanding the powerful arguments as to the absurdity of any such scheme which *The Times* advanced on Sept. 24th, the passenger traffic from these ports should be subjected to a forty-eight hours' detention—a proceeding under which, as *The Times* has well put it, English harbours and rivers "would be choked with vessels containing ..... passengers for whom there would be no accommodation ....."? And if passengers merely sailing from such ports as have been named are to be subjected to this detention, what about those who come from "an infected place"—Paris, to wit—where cholera has been widely prevalent both in 1884 and in 1892? We are sure the system is quite "as foolish as it looks," and this mainly because it cannot be carried out.

But, insists the special correspondent, we ought also "to put ships from infected ports at short distances on the same footing as ships actually infected." Here, again, we are face to face with an interference with a traffic between France and England which at one time during the recent prevalence of cholera amounted to not far from a thousand passengers a day. It would be interesting to know what the Dover Town Council would have to say to this, and where in a gale of wind the unfortunate ships and their complement of passengers would be placed. Our merchants who import butter and fruit from Brittany and the neighbourhood would doubtless also wish to have something to say concerning this proposal, and they would, we expect, appeal to *The Times* itself as to the "cruelty to individuals," and as to the useless interference with the importation of "the fruit, the vegetables, the eggs, the butter, and so on," which that journal has so graphically described.

The theory of "local option" has acquired some prominence in recent years, and it might become a question whether those who do not regard quarantine detentions as foolish should be allowed to do as they like with their own ports, whilst an absolutely impossible and impracticable duty should not necessarily be cast on all other ports. This, we know, would not be at all pleasing to some such ports as Grimsby. They may wish to keep fish from the North German coast out of their port, but not at the risk of its being passed on to another port, and so finding its way into the disinfecting apparatus of English domestic life—namely, the cook's fish kettle—by a new route. Were it not for this view it might be practicable to let ports do as they wish in the matter, for they could then also decide what constitutes an "infected port"—a term which no English Government has as yet undertaken to define. But this point, too, has already been decided in a statesmanlike way by *The Times* when it was condemning resort to any such system. "It is obvious," says that journal, "that one and the same system must be applied to all British ports." This, too, is the view of the special correspondent, who is otherwise the mouthpiece of an opposite contention. He would impose the detention of vessels everywhere and not even allow a discretion to the medical officer of health. "You must do it" is the action which he proposes to be applicable as much to Dover as to Grimsby.

We cannot help thinking that these views of the special correspondent and of those port authorities who advocate quarantine detentions, whether of two, four, or seven days, are based on a failure to apprehend one essential point which underlies our English system of cholera prevention. It is very generally thought that those who support our system of "medical inspection" as opposed to quarantine detentions pretend that the system will absolutely suffice to keep cholera out of the country. This is the reverse of that which is con-

tended by those who are responsible for the inauguration and the future development of the system. On the contrary, they hold that whilst our port sanitary administration ought to be organised on a basis and scale sufficient to serve as a first line of defence, it is, after all, on the improved sanitary circumstances of England and Wales as a whole that we must rely to prevent the spread of imported cholera. The port districts are expected to do their best, and this best will under the English system be infinitely more efficacious than a system of quarantine detentions; but after they have done their best precisely the same is expected of the inland districts. This, too, has been the main strength of our English system of sanitary administration, for it has been largely due to the knowledge, in the face of previous epidemics of cholera, that such detentions as are suggested are impracticable under the circumstances of this country, and will hence not be attempted, that such large and remunerative disbursements have been made for the purposes of public health. We think it most helpful that the defects of our ports and inland districts should be exposed, but we trust that no encouragement will, in view of the actual facts which we have to face, be given to those who advocate quarantine detentions in connexion with the general traffic coming to our shores from the continent of Europe.

THE report of the Lords' Committee on Metropolitan Hospitals, of which we published a digest last week, had been anticipated some months since, and its main conclusions have already been commented on in the columns of THE LANCET. The present Blue-book is only an amended and enlarged form of that previously issued, setting forth the history of amendments and additions, together with some documents of interest, and containing an appendix which furnishes a mass of tables giving the statistics of all the hospitals of the metropolis. These tables must serve for a long time to come as a reference for the principal facts concerning each hospital, Poor-law infirmary and sick asylum, dispensary, whether free or provident, and nursing institution in London. We need not detain our readers long with the principal conclusions of this inquiry. The voluntary system has been investigated carefully, and there is no doubt that it comes out of the inquiry creditably. The system is conducted economically and yet generously, and the members of the Committee pay a very just and much overdue tribute to the large amount of administrative service and ability which is placed at the disposal of the hospitals of this country. Men of high standing in society and in business give their time and money to these institutions as if they were paid for their services. We heartily endorse this praise. If there is one thing more clearly brought out than another in this investigation it is that, on the whole, the great general hospitals deserve all they receive from the public and, indeed, a great deal more. There are some few faults of administration, but these have been unduly censured and criticised, and the time has now come for more support, in order that the empty wards may be filled with beds for the sick poor and that the hearts of treasurers may be lightened of the load of debt. It is discreditable to think that, with the prospect of a winter of fog and frost and short employment, so large a proportion of wards must remain untenanted for want of funds. The report appears, or reappears, opportunely at a time when good-hearted and well-to-do men are devising means for abating the miseries of their poorer neighbours. This report will convince them that in increasing their contributions to the great general hospitals of London they are making an investment of charity that will on a large scale avert "death and all the sad variety of pain," while it will go to perfect that art of healing on which their own cure and that of those who are nearest and dearest to them must sooner or later depend.

The Committee has gone fearlessly and fully into the complaints alleged against hospitals and other medical charities—whether complaints of insanitary condition, as in the case of St. Bartholomew's Hospital; of mode of government, as in that of the endowed hospitals generally, and the tendency to the concentration of a too autocratic power in one or two hands; or of the treatment of nurses, as in that of the London Hospital—and the result still is that they prove to be great institutions after all. In the last case the judgment of the Lords' Committee is that the charges against the hospital authorities were "unsubstantiated," and that the difficulties which did occur would have been obviated if the governing board had not allowed their authority to fall too much into the hands of the salaried officers. Nevertheless, the conclusion arrived at is that it is an admirable institution, which confers inestimable benefits on a very large and very poor population. If the profession is dissatisfied with any portion of the report it will be with that which deals with the out-patient department of the metropolitan hospitals, which has been defended chiefly on the grounds of its undoubted uses in medical education. Those who know the tendency of well-to-do persons to enter the open gate of the out-patient department will think that the evil deserved a more severe censure than has been expressed by the Lords' Committee, and that such disapproval might have been expressed without any serious detriment to the cause of medical education. But while not admitting any serious abuse of the out-patient department, the Committee makes suggestions for arrangements (to which we trust hospital authorities will give due attention) for restricting the number of out-patients per diem and for securing inquiry by experienced officials in all doubtful cases. Two valuable proposals are that encouragement should be given to medical practitioners and the officers of dispensaries to use the out-patient department for consultative purposes, and that in such cases the patients should be left under the care of their medical advisers. Not the least instructive part of this fuller edition of the third report is afforded by the Tables of Provident Dispensaries showing the scant rate of remuneration and the small success of these institutions. A better regulated out-patient department on the lines suggested in the report and a trustful system of coöperation between its officers and practitioners and provident institutions outside would tend much to remove the faults of the out-patient department as at present conducted in most hospitals.

The members of the Lords' Committee have evidently had an interesting discussion on the subject of the monopoly of English hospital appointments by the possessors of English

qualifications. They do not allude to the question whether similar monopolies in Scotland are enjoyed by the holders of Scotch qualifications. Lord SANDHURST carried a liberal resolution in favour of the abolition of all territorial restrictions of qualification for hospital appointments against the Earl of ARRAN, who charitably interposed with a proposal to leave things as they are "lest too many of the best of the Scotch and Irish medical men should be attracted to London who should rather be encouraged to stay in their own country." Unfortunately the protest did not succeed, and the unhappy countries of Scotland and Ireland, which have already suffered from their great men being attracted to England, will be in danger of still further calamity on this score!

The Committee expresses no opinion on the fact that by the Public Health (London) Act, 1891, "every inhabitant" suffering from any dangerous infectious disease will henceforth be entitled to free treatment in the hospitals of the Metropolitan Asylums Board. Nurses have their office magnified in this Report, which contains many suggestions for the improvement of their lot.

The recommendation in favour of a Central Board for supervising the hospitals of the metropolis, composed of representatives of all medical charities, and of other medical or charitable bodies, may be regarded as the chief outcome of the labours of the Committee. We have already commented on this proposal, and hope to revert to it at an early opportunity.

Annotations.

"Ne quid nimis."

SMALL-POX IN LEICESTER.

IT is impossible to foresee the results of the present outbreak of small-pox in Leicester; the number of attacks is not as yet large, hurried demands are being made for vaccination and efforts at isolation are progressing. The disease is, however, spreading, and there are two points in connexion with the measures of prevention on which the town is relying which deserve notice. In the first place, we learn that one family has refused to submit to the Leicester quarantine process. There is no means of enforcing submission to it, and we always anticipated that the real danger to Leicester would lie in a breakdown of this sort. So long as the country was fairly free from small-pox the danger to this unprotected community was trivial, and the so-called Leicester system was never put to any real test. But once let the disease make a little headway, and then such refusals must become numerous, having regard to the miserable accommodation available for carrying it out. We understand that the Royal Commission on Vaccination are about to send Dr. Sidney Coupland, who recently conducted the inquiry for them in the Dewsbury district, to report to them on the present condition of affairs at Leicester. This is in itself a very desirable step. None the less we cannot help thinking that, much as some members of the Commission might deprecate it, the proper course would have been for a representative deputation of the Commission itself to have undertaken this duty. It would only have cost them a few hours to see what provision Leicester has made for its quarantining process, and if they had once gone over the old shed which has long served to safeguard Leicester the vaunted appliances would have been estimated at their proper worth, and the Commission would have seen that the refusal of respectable people to submit to detention under the conditions that have been available was to be expected as soon as a few families of this class were attacked. The disease has, we are informed, also appeared in a populous lodging-house, but no means exist for "quarantining" all the inmates; and here, again, the system breaks down. The other point is of more serious importance. It is reported that small-pox has spread to some of the scarlet fever patients who are under "isolation" in the same hospital. It is a duty of the sanitary authority to isolate infectious diseases, but it is no true isolation to expose the patients, removed from their homes for the protection of the public, to the infection of an infinitely more horrible disease. So well is the danger of placing small-pox and other infectious diseases on the same site recognised that the practice has almost everywhere been abandoned, and it is well known that for many years past the Local Government Board have refused to sanction any such system. But Leicester people, or rather certain among the authorities of Leicester, have their own views of small-pox, and they appear to be deliberately bringing cases of that disease into the same institution and on to the same site as that which is devoted to the treatment of children unfortunate enough to have scarlet fever, and, as must also sometimes be the case, unfortunate enough to be the offspring of parents who, vaccinated themselves, have been taught to believe that there is no need to give their children the same protection. Leicester may again escape as other towns have done, but the day of reckoning will certainly come, and it may at any time be precipitated by the refusal to submit to an unauthorised detention in an old wooden shed or by deliberately ignoring the now well-known danger of bringing small-pox to the same institution as that within the precincts of which patients suffering from other ailments are detained, and to which they may even be removed against their wills.

THE INTERNATIONAL MEDICAL CONGRESS OF 1893.

AN Italian correspondent writes: "In the Aula Magna of the University of Rome has just been held a plenary sitting of the 'Comitato Centrale Organizzatore del XI. Congresso Medico-Internazionale,' at which progress was reported and several important steps were taken with a view to the greater success of the meeting and the convenience of its members. This had been preceded by a visit to the Policlinico on the part of the 'Comitato Esecutivo,' consisting of Drs. Baccelli, Durante, Murri, Golzi, Maraglinno and others, who went over the completed halls of that magnificent structure, and, as a result of their visit, determined that the various Sections of the Congress shall hold their sittings in these halls next September. The non-completed portions of the Policlinico are being pushed forward with vigour, so as to have the entire edifice ready, if not for use, at least for the inspection and appreciation of the 'Congressisti.' At the banquet which followed the fifth Congress of Italian Medicine the toast of the evening was that of Professor Foà, who drank success to the International Congress of 1893. The Berlin Congress, he said, was especially memorable for Italians, as it was the beginning of a recognition by Europe of what Italy—so great in the remote past—had been achieving in the immediate present, and he expressed the hope, amid the approving cheers of his audience, that in 1893 the Italian wing of the profession would earn yet further recognition in the same honourable sense. It would, he added, be in some measure a crowning of the edifice of national unity if Rome were to become the scene of the 'Instauratio Magna'—of the grand rehabilitation of Italian medicine. In a former communication I spoke

of the apathy betrayed by some of the more provincial schools of Italy as to the importance of the Congress, apathy shown in a tardiness on the part of their *personnel* to signify their willingness to assist at its proceedings. That, I am happy to say, no longer exists; indeed, if any such unworthy feeling still lingers it cannot long survive the hearty sympathy with which King Humbert has thrown himself into the preparations for the Congress, at which, through Dr. Baccelli, he has announced his gracious pleasure to assist, and that he will open the sittings in person. All that now remains to be hoped for is a healthy season—temperate as to heat and exempt from that cholera visitation which the 'weather wise' in epidemiology anticipate."

FRIEDENHEIM: A HOME FOR THE DYING.

DEATH must always be accompanied by circumstances of sadness, but the conditions under which dissolution approaches are in some cases peculiarly distressing. In only a few hospitals is accommodation provided for patients for whom all hope of recovery has to be given up. Therefore the humane project started by Miss Davidson some seven years ago, which consisted in founding a Home for the Reception of the Dying, cannot but enlist the sympathy and aid of the benevolent. The Home, situated in the Upper Avenue-road, St. John's Wood, was opened on the 10th inst. by the Duchess of Teck, in company with Princess May and her brother, the Prince Adolphus. The history of the movement was recounted by Dr. Schofield, who has taken great interest in the enterprise, and who entered into some particulars in connexion with the working of the institution. It appears that the patients at the home die on an average in three months, but the care bestowed on them is rewarded in some instances by restoration to health. Except in the paying wards the beds are free, preference being given when a vacancy arises to the most distressing cases. The Home will accommodate forty inmates.

SIR JAMES CRICHTON BROWNE ON EDUCATION.

ON the Speech Day at the Reading Grammar School (on the 29th ult.) Lord Coleridge defended Archbishop Laud, who was educated at the school, against the criticisms of Lord Macaulay and enlarged on the advantages of a classical education on the old lines, while Sir James Crichton Browne expressed his interest in the school, as being one that is conducted on sound physiological principles. In the Reading Grammar School, he said, the dual nature of humanity is always held steadily in view; bodily vigour is not sacrificed to the attainment of mere intellectual acuteness, and the cult of culture is not altogether subordinated to the worship of the great god Biceps. The head master, Mr. Barnard, has found out how to sail safely in the middle course, avoiding on the one hand the Scylla of brawny and stupid athleticism, and on the other the Charybdis of pale and sickly "punditism"—if such a word might be coined. Hence it has come about that the school is sharing meritoriously in the work that was ascribed at Oxford to the universities a few days ago, and is sending forth boys prepared to be not only men of thought but men of action. It is preparing boys for the universities, for the public services, for the professions, to become good and useful citizens, to make the best use of such faculties as they possess, and to draw from life the happiness that life never fails to yield to all those who have learnt how to live truly. It has long been admitted that one of the first conditions of success in life is to be, as Herbert Spencer has put it, a good animal; but we can now go further than that, and affirm that muscular exercise is essential as a stimulus to brain growth. We have reason to believe that there are tracts of the brain that do not grow properly if the muscles over which they preside are not duly and timeously exercised; and, as these tracts have mental as well as motor functions, it may be that to curtail muscular activity is to stunt brain evolution and intellectual development. Sir James Crichton Browne insisted that those conducting education should be dominated by a lofty ideal of the schoolmaster's mission, but restrained by a just conception of its limitations. Education is the guidance of growth. We cannot in one generation expand the straitened forehead of the fool and convert it into a spacious dome of thought, unravel the intricately inwoven strands of the brain and knit them up afresh, or alter the whole constitution of the nervous system. What we can do is to train, shelter, foster, nourish, while we extirpate cankers and prune away gadding offshoots. He will be the most successful educator who comprehends alike the possibilities and impossibilities of his craft.

THE SPREAD OF SMALL-POX.

WE referred in our last issue to a number of towns where small-pox is now prevalent. The list has already become a much longer one. Small-pox exists to a more or less extent in Bradford, Brimington, Blackburn, Birkenhead, Burton-on-Trent, Carlisle, Chadderton, Daventry, Halifax, Higham-Ferrers, Hull, Leicester, Liverpool, Newport (Mon.), Nottingham, Otley, Rotherham, South Shields, St. Helens, Wakefield, Warrington, Wigan, Willesden, Mansfield and Newark. In some cases it is confined to single families; in others it is much more serious. In Warrington there have now been 243 cases, and 28 fresh cases occurred in the week ending Oct. 29th. The state of affairs in this town has suddenly become so serious that the Local Government Board have sent Mr. T. W. Thompson, one of their medical inspectors, to advise the authorities on the spot. At Otley twenty persons have already been attacked and a hurried attempt at hospital provision is being made. The case of Leicester we deal with separately. On the whole the outlook is highly unsatisfactory. The seasonal activity of small-pox is just commencing, and an amount of neglect as to vaccination prevails which is unparalleled in any of a long series of years before the appointment of the Royal Commission into the subject. The Commission has already been sitting ever since May, 1889, without having made any pronouncement except one, which tended still further to prevent the due administration of the Vaccination Acts, whether by the local or the central authorities concerned.

THE BEGINNING OF THE FOG SEASON.

THE meteorological conditions during the past week have been preëminently favourable for the production of fog. A gradual increase of pressure, a distinct lowering of temperature, a persistent envelope of heavy cloud, preceded by wet weather, have all conduced to the formation of those tiny particles of moisture which in a state of suspension in the air give rise to mist; mist in its turn attracts the various impurities existing in the atmosphere of smoky towns, and thus the more objectionable fog is formed. The dangers arising from fog are mostly confined to railway and vehicular traffic, although when it is of unusual density it may affect the safety of foot passengers as well. Precautionary measures have been taken this year at the London Docks, where chain fences have been erected on the quays and the edges of the platforms have been painted white. The character of the familiar reddish-brown fog of London is very distinct. Travellers from the suburbs must frequently notice the difference of smell between the fog, or rather mist, enveloping their homes and that which envelops the city. Suburban mist is characterised by a smell which recalls the odour of crude carbonic acid and is probably derived from the decomposition of autumnal leaves. But the moment the traveller arrives in town he observes at once that

the impression conveyed to the nose is exactly that experienced when a fire is first lighted. The smell of London fog is, in fact, that of wood burning. This naturally suggests that if the lighting of fires could be dispensed with much of the evil might be mitigated. Or if coal fires could be allowed to burn slowly overnight, so as to dispense with morning lighting, the nuisance might—to some extent, at any rate—be avoided. Although all are agreed that fogs and mist constitute a pest which must be got rid of, there remains one compensating advantage which has often been overlooked. It is reasonable to suppose that a fog effects a partial purification of the atmosphere. This is borne out by the fact that when a fog subsides the deposit contains the carbon, sulphur, organic bases and other injurious and irritating particles which formerly existed in a state of suspension in the atmosphere. Just as water is freed from objectionable suspended matter by the addition of an impalpable powder, or a mixture which gives rise to a fine precipitate, so probably is the air deprived of suspended impurities by the subsidence of the moisture particles in which the impurities become entangled. It is a matter of common observation that the air is remarkably clear after the subsidence of fog or mist. Wind or rain are, however, equally effective and much more agreeable agents in accomplishing this purification. If we cannot get rid of mists while we are beset with the peculiar conditions which characterise the climate of this country, we can at least make an attempt to prevent the emission of those particles into the air which convert that mist into the intolerable and irritating vapour ever known and remembered as London fog.

A LABOUR COLONY FOR EPILEPTICS.

HOSPITALS for the sick in mind and body, homes for the incurable, for the dying even, school prisons for the cure of moral errors, and many like ventures of humane zeal attest the earnestness and often also the wisdom of Christian charity. Both qualities are apparent in an undertaking which owes its origin to German enterprise, and which, as was announced in THE LANCET on Aug. 6th and Aug. 13th, has already found an extension in this country in the Home for Epileptics at Godalming, which was recently opened by the Duchess of Albany. This colony for epileptics was founded some twenty-seven years ago near Bielefeld in Westphalia, and was lately described in the *Contemporary Review*. Its germ, the labour home or Bethel, has during this period undergone very extensive developmental changes. Designed in the first instance for male adults, it opened its doors at a later stage to women and children also, with the natural result that lack of space soon rendered it necessary to open other similar establishments. A portion of the adjoining Teutoburgian forest was acquired at small cost. The cheap and willing labour supplied by the male inmates after a time reduced to a state of comparative cultivation what was formerly mere waste land, and a thriving village sprang up as the result of their exertions. Here by degrees an increasing number of stricken people of all ages have gathered and are now accommodated in cottage homesteads according to their relative ages, condition in life and the stage of their malady. Agriculture has from the first proved to be the most successful form of work in which the men of the colony have been engaged, and the fruits of their tillage are in wide request. Handicrafts are practised also, but these, owing to the cost of instruction and other causes, have not been found equally profitable. One great difficulty has been to secure suitable employment for the women. In the instruction of the children a greater degree of success has been attained, and it is noteworthy that none of those inhabiting the Bethel homes have lost their reason. Steady work forms the main feature in the system pursued in the colony, and every care is taken by this means—by maintaining cheerful associations, by wholesome nutrition, and by avoiding causes of mental irritation—to guard and strengthen the nervous health of its inhabitants. As yet it is not self-supporting. This fact, however, does not disconcert the managing committee, whose aim is rather to make it first a philanthropic and then a commercial success. The chief difficulty connected with the working of such an experiment as this consists in the moral contagion almost inevitably associated with nervous disease. This does not seem to have proved itself an insuperable obstacle in the case before us, and we are thus encouraged to hope that the Westphalian system may on further trial be found worthy of more general adoption.

OPENING OF SCHOOL-BOARD PLAYGROUNDS.

IT was not to be expected that the recent action of the London School Board, in throwing open to the children of adjacent neighbourhoods a number of playgrounds under its management, should pass entirely without censure on the score of economy. We are not therefore surprised to learn that the expenditure thus incurred was disallowed by the officiating auditor. Happily for the children of the metropolis, however, this decision was not approved by the Local Government authorities, and there is a prospect that the access thus generously afforded by the Board to the means of recreation at its disposal will constitute a permanent source of pleasure and of health to those whom it was designed to benefit. We can only trust that it will be found convenient to extend still further the scope of this useful arrangement and to open with a like purpose those playgrounds which as yet remain closed to others than children attending the schools. We need not enter into details as to the obvious benefits thus conferred upon the health of city children. Their most prevalent malady—anæmia, with its associated weaknesses of constitution in which are sown and bred the germs of numerous and serious ailments—knows no remedies equal to fresh air and a sufficient dietary. Money may not be available for the latter, however plain it be; home is commonly but a name for crowded uncleanliness. In such a case it is very desirable even to afford the opportunity for free action of limbs and lungs in an atmosphere which is at least the purest obtainable.

THE PHYSIOLOGY OF THE IRIS.

SOME years ago Dr. Brown-Séquard startled physiologists by stating that the iris responded to the direct action of light, and demonstrated the fact by dividing the eyes of eels and frogs into a posterior and an anterior half, and directing a ray of light upon the iris. The contraction of the sphincter pupillæ under these circumstances showed that at all events the act was not of a reflex nature through the retina, but it was possible that ganglionic cells might be distributed in the tissue of the iris, which might be sensitive to light and liberate motor impulses in obedience to that stimulus. Steinach has recently investigated the subject, and by a series of careful observations has arrived at the conclusion that the contraction of the iris when detached from the retina is due to the direct action of light upon its structure. In frogs kept for some time in a dark cool room, and especially in the brown grass frog (rana temporaria) and also in other amphibia and in many fishes, the phenomena may be easily demonstrated even in the isolated iris. He found that no effect was produced by illuminating the peripheral zone of the iris (ciliary region); but it was necessary that the light should fall on the pupillary margin, of which, if only a segment be acted upon, contraction occurs. The contraction still happened when the nervous apparatus of the iris was excluded by the

action of atropine. Steinach demonstrates that the contraction is not due to the influence of the chromatophores and entertains no doubt that it is really the muscular fibres of the sphincter that are acted on directly. He has made numerous examinations of these, and finds that in amphibia and fishes they are strongly pigmented. In eyes that have been exposed to the light they are short, thick, and not very well defined; whilst in animals that have been kept in the dark they are slender and sharply contoured. He regards the presence of pigment in these muscular fibres as the determining cause of their sensibility to light. The several rays of the spectrum are not all of equal power in causing contraction in the isolated iris. The red rays up to the line C are comparatively ineffective, but the power increases up to the line F, where it reaches its maximum, and from this point it gradually diminishes. In a comment upon this paper Langendorff remarks that other muscle cells besides those of the sphincter pupillæ possess pigment granules in their interior—as, for example, those of the tensor choroideæ in mammals.

MEDICAL MAYORS.

THE following members of the medical profession have been elected to the mayoralty for the ensuing year in the undermentioned towns. We shall be glad to receive an intimation of any omission which may have occurred in the subjoined list:—Bacup, Alderman W. J. Clegg, M.D., M.R.C.P. Edin.; Brighton, Alderman Joseph Ewart, M.D. St. And., F.R.C.P. Lond.; Chipping Norton, George Wright Hutchison, M.D. Aberdeen, M.R.C.P. Edin.; Crewe, William Hodgson, L.F.P.S. Glas., L.K.Q.C.P. Irel.; Hastings, A. R. Croucher, M.D. St. And., M.R.C.S.; Louth, Palemon Best, M.B. Lond., M.R.C.S.; Lymington, W. R. Hill, M.D. Edin., M.R.C.S., J.P.; Montgomery, N.W., Fairles-Humphreys, M.R.C.S.; Ruthin, J. M. Hughes, M.B., M.S.; Saffron Walden, John Parkinson Atkinson, M.D. Glas., L.R.C.P. Lond., L.R.C.S. Edin.; St. Ives, Cornwall, J. M. Nicholls, L.R.C.P. Lond., M.R.C.S.

THE ACCIDENT TO A SCOTCH EXPRESS.

THE lamentable accident which happened to the Scotch express near Thirsk on the morning of Wednesday, the 2nd inst., has directed public attention once more to the subject of the overwork of railway servants and the risks not only to the men themselves, but also to the public, which such overwork involves. The matter is one to which we have on many occasions referred. The evidence furnished by Parliamentary reports, upon which our comments have chiefly been based, has been much stronger than that furnished by the facts of the present case, but, naturally enough, the public mind receives from a disaster like that which occurred at Thirsk an impression which could not be communicated by even the fullest and most significant statistics. The very frank statement made by the signalman will very properly do much to attract public sympathy to him in his most painful position. That sentiment will be quite independent of any question of apportioning blame that may have hereafter to be considered, and we are very far from wishing to anticipate the verdict of a qualified tribunal that will doubtless be called upon to consider the case. But one thing seems to be clear, even from the fragmentary statements already made public—namely, hat whatever improvements it may be possible to introduce into the conditions of the employment of signalmen, a further protection for the travelling public must be sought in the general adoption of an efficient system of interlocking signals. The effects of overwork may arise, even where the limits of a man's regular employment are most carefully laid down, in consequence of accidents which break in upon the repose of his leisure time. Moreover, even when there is no overwork or undue strain of any kind to cause special danger, there is the danger that is always present of a sudden attack of illness, which makes human agency a necessarily untrustworthy instrument with which to work. That a solitary man shut up in his signal-box should have the power by a mistake to bring on a catastrophe like the collision of two trains is of itself a standing and startling peril, and one which can be and should be dealt with at once. The singular immunity from serious accidents which we enjoy in the ordinary course of railway travelling has led the authorities and the public also to look with too great complacency upon the slow progress which the improvement of our system of railway working makes and the long interval by which the ordinary practice is separated from the best knowledge of the hour. It is to be hoped that among the lessons of the calamity which we are now deploring this one will not be lost to the public mind and conscience, and that those especially who are responsible for railway administration, whether in the way of the actual work or the official supervision, will bestir themselves to bring about a system under which the evil consequences of those mishaps that must happen under any imaginable system may be minimised and the public safety secured not only by the diligence and skill of those who control the mechanism of our railways, but by the foresight of those who design it and in designing have an eye not less to the possibilities of its breakdown than to its smooth working.

PARALYSIS FROM ARSENIC POISONING.

TWO cases of this nature recorded by Erlicki and Rybalkin are referred to in a recent number of the *Neurologisches Centralblatt*. The course of the affection was similar in the two cases. It commenced with irritability of the gastro-intestinal tract, general weakness, paresis of the extremities with atrophy, contractures and changes in electrical irritability and sensory changes. In one case also there was some mental disturbance. One patient improved after two years; the other died of phthisis after the lapse of a year. There was found degeneration in the peripheral nerves, together with changes in the anterior grey horns, especially in the lumbar and cervical enlargements. The ganglion cells were reduced in number and those that remained were altered in shape and size, while the protoplasm was in part replaced by pigment. The processes of the nerve cells were deficient in part, and some of the cells contained vacuoles. The nerve fibres also in the anterior horns were reduced in number. Professors Erlicki and Rybalkin regard the alterations in the cells in such conditions as being due not so much to the direct action of the poison as to the mechanical alterations in the circulation and to physiological and chemical peculiarities in the blood.

THE PREVENTION OF CRUELTY TO CHILDREN.

THE National Society for the Prevention of Cruelty to Children is to be congratulated on the continued success of its efforts. According to its latest published report, the total number of cases investigated during the year 1891-92 was 8324. Of these, 7291 proved to be genuine, and of 1115 in which a prosecution was instituted, 1042 resulted in conviction and punishment. These facts bear out the truth of remarks for which we are indebted to the experience and candour of a well-known judge, who tells us that he cannot recall a case of prosecution by the Society which has not been justifiable, or more than one which has not been successful. Surely no stronger terms of commendation could better assure the Society's reputation for judicial fairness in the conduct of its work. Another proof to the same effect is found in the excellent understanding which exists between its agents and the police officials We are pleased to learn from the report that wherever the law

has been applied with due firmness to the repression of cruelty this vice in its severer forms of savagery has undergone marked diminution. Notice is taken of the important fact that in a large proportion—this year 3809—of the cases investigated the children have been insured, and we congratulate the Society on its vigilance in promoting legislative activity both with respect to a form of providence which is open to abuse and to the disposal of nurse-children. Finally, we trust that its agents will prosecute with due energy their inquiries as to a dangerous custom prevalent in some quarters—namely, that of drugging young children with laudanum. This familiar practice of Eastern motherhood cannot safely hold a place in English domestic life. The Society's income shows a satisfactory increase which we trust will be maintained during the current year, and for the employment of which, as we have shown, deserving objects can still be too easily found.

CEREBRAL ABSCESS.

IN a recent number of the *Berliner Klinische Wochenschrift* a brief abstract of a case by Zeller, read before a meeting of surgeons in Berlin, is given. The patient became ill in the middle of January with symptoms of influenza. A phlegmonous process followed in the right orbit. This was laid open and the pus evacuated. But soon after the patient began to suffer from pain in the head and vomiting. There was no cranial nerve paralysis, but both discs were injected, and on the left side blurring of the edge was present. On account of the absence of any progressive tendency in the symptoms and the localisation of the painful area to the right forehead close to the middle line the diagnosis of abscess was preferred to that of meningitis. Professor Sonnenburg operated, first of all laying open the old abscess cavity, but finding nothing except a small defect in the roof of the orbit. He then incised the right side of the forehead and trephined the frontal bone near the middle line on the right side. The dura mater did not pulsate, but, on probing, pus was found in the right frontal lobe anteriorly, and finally sixty cubic centimetres were evacuated. The pulsation returned at once and materially aided in the evacuation of the abscess cavity. The drainage-tube was gradually shortened and finally removed, and only a small granulating surface remained. All the symptoms had subsided, and in a later note it is added that the patient had been discharged from the hospital completely cured.

THE POSTMAN'S KNOCK.

IT is easy to see that a correspondent who expresses himself with some emphasis respecting the familiar postman's knock, notwithstanding that he veils his protest under a covering of quaint humour, has given utterance to a genuine sense of injury. His appeals to the busy, the studious, the nervous, the irritated and the sick are not wanting in a kind of pathos. Neither can it be said that they are without some rational foundation. What Londoner has not occasionally been startled by the sharp, loud and sudden double knock when it descends upon the entrance-door of our dwellings after dark and rings through the stillness of the hall or passage beyond? There are times, no doubt, when the sound is welcome. We are well, at leisure, our nerves unshaken, our expectations not unpleasant, and the well-known sound affects us neither much nor disagreeably. There are likewise other and opposite conditions. Weariness and illness have perhaps found a brief respite in slumber. Or it may happen that the mind is for the moment poised at a crisis of thought or strains in effort. At such a time we bless (not sincerely) the slightest trifle of distraction; how much more this loud and instant reverberation from the official outer world. The ancient preacher would no doubt have told us that there was a time to refrain from knocking, yet established rule knows only its own noisy custom. Relief must be sought by personal exertion. A decided step in this direction would consist in the total abolition of door-knockers, and certainly a bell, whether of mechanical or electric origin, possesses in this connexion distinct advantages. Where no such reform is allowable, muffling provides a partial remedy almost too familiar for mention. Again, in the extreme case, such as sleepless irritability, where no avoidable sounds can be tolerated, householders might easily prohibit by a warning placard the use of either bell or knocker. The postal summons may be indispensable, but we see no reason why it should not be tempered by one or other such means as we have here noted.

"REMOVAL OF TUMOUR FROM THE SPINAL CANAL."

WITH regard to the case of spinal tumour referred to last week, we understand that Dr. Ferrier and Mr. Watson Cheyne are preparing full notes of the case for early publication in the columns of THE LANCET. The tumour was intra-dural, had been growing probably for eight years, was situated opposite the seventh to the tenth dorsal laminæ, and was easily and quickly removed without any injury to the cord or nerves. The cause of the patient's death is by no means clear, the main symptom afterwards being irregularity in the heart's action, which began when the position of the patient was changed prior to the commencement of the operation.

LONDON BOARD SCHOOLS.

THE Lambeth Vestry has recently taken out a summons against the London School Board for having allowed the lavatories to be in a foul state so as to be dangerous to health. At the request of the School Board the magistrate granted an adjournment on the ground that the work ordered by the officer of health was being carried out. It cannot be denied that the fact that the Vestry have taken out a summons, and that the necessity of the work is not disputed, reflect on the management of the Board. With any reasonable supervision this would have been impossible. Seeing that parents are required by law to send their children to school, every care should be taken to ensure that these schools are free from dangers to health; it is obviously the duty of the Board not to wait for the compulsory action of the sanitary authorities, but to initiate at once any improvements that may be necessary. It would be interesting to know what machinery the Board has at its disposal for performing this very necessary duty, and we trust this question will be asked at an early meeting of the Board.

ARREST OF HÆMORRHAGE AFTER TOOTH EXTRACTION BY HOT WATER.

DR. JULIUS SCHEFF, jun., of Vienna, according to the current number of *Ash's Quarterly Circular*, recommends strongly the use of hot water for arresting hæmorrhage after tooth extraction. "We are accustomed," he writes, "to stop hæmorrhage by the method that has been used for generations—viz., by the direct application of cold water to the wound. Practitioners started with the idea that heat caused expansion of, and induced increased bleeding from, the vessels; but, on the other hand, cold caused contraction. In an ordinary case of extraction hæmorrhage from the arteria dentalis, or from the gums and periosteum, soon ceases; but it frequently happens, even when the patient does not suffer from hæmophilia, that there is difficulty in arresting the flow of blood." Dr. Scheff mentions three cases occurring in his practice in each of which there was a history of profuse hæmorrhage after extractions. "I allowed one patient," he says, "to take a great quantity of cold water, and yet there appeared not the slightest diminution in the bleeding. I then took a glass

syringe and continuously applied hot water in drops to the wound, from which the blood previously trickled without cessation. After a few seconds the bleeding diminished, a coagulum was formed, and the bleeding finally ceased. With the second patient I used hot water at once, and the flow of blood was arrested. In the third case the wound had been bleeding freely for a long time; I plugged the alveolus with iodoform gauze, and on removing the plug the wound bled afresh. I then employed hot water; the hæmorrhage ceased and did not recur." Dr. Scheff applies the hot water by means of a syringe, injecting it by drops into the socket of the tooth. The arrest of hæmorrhage in surgical operations by the application of heat is a recognised resource, and it would therefore seem that this principle might with advantage be applied in cases of tooth extraction, especially as the mouth is able to bear a very high temperature without inconvenience. In fact, water so hot that it causes pain when the finger is inserted in it will in many cases be tolerated in the mouth.

VACCINATION AND SMALL-POX.

IT is difficult for the majority of people living at the present time to appreciate the injury done by small-pox before vaccination was generally adopted, but the opposition shown to vaccination in certain localities threatens to make small-pox in our time as terrible a calamity to the community as it was in the early part of the century. Warrington is now visited by this disease, and on Saturday an inquest was held upon the body of a girl who had died from small-pox and who had had no medical attendance. The necessity for the jury to view the body led the coroner to arrange for this to be done at a safe distance, and when it was afterwards stated that one of the jurymen had entered the place where the body was laid out, the coroner said the particular juryman would be excused from serving. Probably these precautions were necessary, but we may well contrast this possible risk with the safety with which revaccinated nurses in small-pox hospitals attend upon the sick. But it is not matter for surprise that ignorant persons should be led to possess exaggerated views of the risks of vaccination, and should fail to appreciate the nature of small-pox. We have before us an advertisement of a lecture given this week in the Public Hall, Rochdale. The lecture is announced by the Rochdale Anti-compulsory Vaccination Society. The advertisement contains the notice that the lecture will be illustrated with limelight views, and that "as some of the pictures are very painful, sensitive persons are requested not to attend." While all these efforts are being made to discredit vaccination, we would suggest to medical officers of health the necessity of seriously endeavouring to combat the prejudices of the many who have no opportunity of forming any correct idea of the dangers to which unvaccinated persons are exposed.

THE INVESTIGATION OF INDIAN DISEASES.

WE gather from the Indian newspapers that a conference will probably be held at Calcutta during the present cold weather with the view of settling where a bacteriological observatory is to be established in India. It is said that the bacteriological observations at Lahore and Poona have not been a success owing to the climatic conditions of those places. There is no reason, of course, why the work at these laboratories should be confined to any particular branch of pathology or hygiene, but it is time that India should apply all the latest methods of modern scientific research to the investigation of disease-causes. The diseases that prevail in India not only cause a great loss of life there every year, but as regards one of them at any rate—namely, cholera—India is regarded by many authorities as the birthplace and starting-point whence epidemics of that disease derive their origin and spread to other and distant countries. It is consequently only right and proper that the imperial power which rules India should accept the responsibility of its position, and spare no pains to provide the means and all modern appliances for instituting a scientific inquiry into its exact nature, origin, causes and modes of spreading. There are other diseases also, enteric fever for example, into the exact nature and causes of which further information is urgently needed. But, as we have said, there are many subjects calling for further investigation in India, the study of which would not lack practical interest and application, and the Government of India could not fail to reap advantage from such investigations. We should like to see something like an institute of preventive medicine organised and established in India, with its bacteriological laboratories in connexion with a public health department distributed over India consisting of different local bodies at various stations, each one made up of a medical officer and an engineer officer of the public works department, specially trained to the work. The principal medical officer at any station might then refer to them on the occurrence of any local outbreak of disease, and they should at once proceed to undertake its investigation, with the aid of, and in connexion with, the Institute of Preventive Medicine, to which all matters requiring bacteriological or special methods of investigation should be referred for report. The Government possesses in Surgeon-Major D. D. Cunningham an officer well adapted to act as the directing head of such an institute, who should work in connexion with a staff of medical officers, a sanitary engineer officer and a chemical examiner attached to the institute. As regards the details of the scheme, however, these could be best settled in India.

"INFANTILE RESPIRATORY SPASM."

IN a paper recently read before the Edinburgh Medico-Chirurgical Society Dr. John Thomson gave a short account of five cases that had come under his observation in which this curious and interesting condition had existed. It is also known as congenital laryngeal stridor, or infantile laryngeal spasm, and Dr. Gee has described a similar, although somewhat different, condition under the term "respiratory croaking." Of Dr. Thomson's five cases, three were boys and two were girls, whereas in all previously recorded instances where the sex is mentioned it seems to have been confined to girls, and the condition is often said to occur only in female children. As regards family history and general health, there was nothing of very great significance, except that in four of the cases more or less indigestion was present. In none of the patients was rickets apparent when the children were first seen, but it appeared later in those longest observed. There was no sign of congenital syphilis in any of the cases, and intellectual development seemed perfectly good. The onset of the stridor was noticed in three instances immediately after birth, but in one infant it was not observed until a week, and in the other a fortnight, later. As regards the course of the malady, Dr. Thomson says that in severe cases the stridor goes on increasing in loudness during the first two or three months and then tends to subside spontaneously, and as improvement goes on the intervals become longer and the sound less loud, that accompanying inspiration, the crowing sound, disappearing first, while the croaking may still be present at times. After the stridor has ceased to be heard under ordinary conditions it may reappear if the child is specially excited or angry; when the stridor is present inspiration begins with a croaking noise and ends in a high-pitched crow. When the breathing is quiet the latter does not occur. Expiration is accompanied by a short croak when the stridor is loud, but at other times it is noiseless. As regards other symptoms, the indrawing of the chest wall and the episternal notch were well marked in four of the cases, but the

alæ nasi did not move with respiration, and there was a striking absence of distress or cyanosis. Variations in the intensity of the sounds were not uncommon, and there were occasional intermissions, even when the condition was most constant and severe. The sounds were notably intensified by mental perturbation, more so, apparently, when the child was excited and apprehensive than when actually crying. Sleep seems to have no constant effect on the condition, and it does not cease when the tongue is depressed, nor even when the nostrils are closed, and when the child is taking the breast there is still sufficient air entering the nostrils to cause loud stridor. The effect of the ailment on the general health is not great, and the most effective treatment apparently is by regulation of the diet and other general precautions. Dr. Thomson regards the condition as due to spasmodic muscular contraction, the cause of this being some central disturbance of function, and he considers it closely analogous in nature and etiology to ordinary speech stammering, both being the result of defect in the proper coördinating mechanism.

MYOPIA IN CANTON GENEVA.

DR. E. SULZER, *privat-docent* in ophthalmology in the University of Geneva, has memorialised the Minister of Public Instruction for permission to make systematic investigation into the proportion of the myopic youth, male and female, attending the schools in the canton, and having obtained the Minister's sanction has for some time been at work on the materials of an official report. This document, Dr. Sulzer announces, will have a twofold reference—one for the medical profession and another and more practical one for those engaged in teaching. As regards the prevalence of myopia in Switzerland, France and Germany, Dr. Sulzer has already instituted a statistical comparison, from which it would appear that this affection is far less common in the former of these countries than in either of the two latter. In Germany and France, indeed, but particularly in Germany, the subject has for years engaged the serious attention of the Government, while in Great Britain the malady, if not so pronounced, is at least common enough to justify official investigation such as that undertaken by Dr. Sulzer. "Over-pressure" may assume other forms besides those arising from brain fag; and myopia is one of them.

NURSES FOR CHOLERA.

WE observe with much satisfaction that active steps are being taken to prepare for a possible visitation of cholera next year. One of the greatest difficulties which will have to be met is to find a sufficient supply of competent nurses to take charge of the sick in any locality in which the disease may appear. The duty of making the necessary provision will be imposed on sanitary authorities, but we anticipate that it will be no easy task to meet the demands which will be made upon them. The forethought of Her Royal Highness Princess Christian in bringing together representatives of the Royal British Nurses' Association and the Society of Medical Officers of Health is therefore much to be commended. On Monday the late Lord Mayor, Sir David Evans, presided at the Mansion House over a meeting of this Association and the Council of the Society of Medical Officers of Health, at which Her Royal Highness was present. The meeting was well attended, among those present being Sir Joseph Fayrer, Sir Dyce Duckworth, Dr. Thorne Thorne, C.B., Dr. Bezly Thorne, Mr. Shirley Murphy (President of the Society), Dr. Heron, Dr. Armstrong and Dr. Sedgwick Saunders. Dr. Thorne Thorne explained the duties which would devolve upon sanitary authorities, and Dr. Bezly Thorne gave an account of the steps which it was proposed should be taken by the Nurses' Association. It was arranged that a roll of nurses should be at once opened which should contain the names of all who were willing to serve, so that sanitary authorities should have immediately at their disposal a staff of trained women ready to undertake this important duty. We trust that this invitation will meet with a cordial response, and that many nurses will be willing to render this public service. The Lord Mayor undertook to communicate with the mayors and provosts of other towns, and every effort will be made by medical officers of health to make this movement known throughout all parts of the country. We sincerely wish it every success. The public has every reason to be grateful to her Royal Highness for this timely and valuable suggestion.

THE SEMMELWEIS INTERNATIONAL MEMORIAL.

THE Executive Committee appointed on the 24th ult. have issued an appeal to the medical profession in favour of the above object. The hon. secretary has written to us to express the cordial thanks of the members present for the support rendered by THE LANCET to the movement. We shall be glad to find, when the first list of subscriptions comes to be announced, that the appeal has been widely responded to. It may be observed that the maximum subscription to the fund has been limited to one guinea, which should be forwarded to the secretary, Dr. C. J. Cullingworth, as early as possible.

CONJUNCTIVITIS AT CARLISLE.

THE number of cases of a rather severe form of conjunctivitis which have appeared in Carlisle during the last fortnight has been the subject of comment amongst local medical practitioners. The inflammation has been accompanied with redness and heat of the skin of the eyelids, as well as swelling and deep injection of the mucous surfaces of the eye. There has been observed in some cases hæmorrhagic patches round the cornea. The eyes have not been attacked simultaneously, usually a day or two intervening. Pain in the forehead and temples has been severe. So far no grave mischief has been associated with the conjunctivitis and the cases have convalesced rapidly.

DIPHTHERIA AND THE METROPOLITAN ASYLUMS BOARD.

MR. LITTLER, in his last letter to *The Times*, makes a point of the occurrence of diphtheria amongst children convalescent from scarlet fever in the hospitals of the Board. The complication of scarlet fever by diphtheria certainly has occurred in the hospitals to an extent which has caused anxiety to the Managers and their able medical officers. But it is a complication not confined to cases in these hospitals, and we gather from the last report of the statistical committee of the Board that its occurrence has been of late less, rather than more, frequent. Thus in the Western Hospital fourteen cases of diphtheria occurred in scarlet fever cases in 1891, as against thirty-three cases in 1890. In the South-Western Hospital only one such case occurred. In the South-Eastern Hospital no mention is made in the report of the medical officer of such a complication. In the Northern Hospital eleven cases occurred last year. While this complication, graver and more fatal than any other of scarlet fever, must be severely watched and combated, it is only fair to admit that the two diseases have some subtle points in common and some subtle relation to each other which pathologists are only beginning to realise and to study. It frequently happens, according to Dr. Gayton of the North-Western Fever Hospital, "that a case certified as diphtheria and having the well-marked throat symptoms connected with the disease was found some days after admission to be desquamating. In other words, the case was one of scarlet fever *plus* diphtheria, a natural result ensuing—the infection of others in the ward." It seems very important first that all

such doubtful cases should be placed in a separate ward, as Dr. Gayton suggests, till their real nature is made clear, and, secondly, that minute inquiries should be made of the history of the patient *before admission*, and the result of such inquiries communicated to the local sanitary authority.

MICROBES IN WATER.

IN an experimental study upon the microbes of water with application to the sanitary hygiene of the town of Lyons Dr. Victor Despeignes (Étude Expérimentale sur les Microbes des Eaux avec Applications à l'Hygiène Sanitaire de la Ville de Lyon) goes very carefully into the whole question of primary infection of river water, of filtration and of secondary contamination. He records the results of a very large number of observations and experiments and comes to the following general conclusions: that the water distributed to the inhabitants of Lyons, although filtered under good conditions, possesses, when it arrives at the distributing taps, bacilli so numerous that they constitute an appreciable danger to the public health. The wells of Lyons, all excavated in extremely permeable soil, and therefore very easily contaminated under the influence of variations in the level of the ground water by the neighbourhood of sewers and privies, should be absolutely forbidden. Only in a very few cases can they provide water equal to that supplied from the Rhone, and being subject to numerous modes of infection they are sources of very great danger, as is evidenced by the epidemics which are so frequently attributed, and even traced, to their presence. The waters of the springs of Lyons are not absolutely pure; they become easily contaminated by means of "fissures" and "faults," and putting aside all question of quantity they cannot be looked upon as sufficiently sterile for the authorities to think of utilising them for drinking purposes. The paper is a good practical treatise and affords evidence of the valuable work that is being done in connexion with water-supplies.

EXTIRPATION OF THE LARYNX.

ON Oct. 19th Dr. M. Grossmann read a paper before the Vienna Medical Society on Death after Extirpation of the Larynx (*Wiener Medicinische Wochenschrift*, No. 43, 1892). He considered briefly the history of laryngology, dwelling especially on the researches of Galen, who showed that when the recurrent nerves were cut through on both sides the voice was lost. Experience had shown that cases in which the larynx had been totally or even partially extirpated often ran a peculiar but characteristic course, ending in death. From two to five days after the operation, although apparently the wound was healing well, a remarkable change was noticed in the pulse; generally the number of beats per minute fell from 80 to 40, or even 20, whilst in another class of cases the number rose to 160. Œdema of the lungs then set in, followed by "paralysis of the heart" and death. Professor Koch had maintained that after extirpation of the larynx these symptoms were due to the division of the depressor nerves, which ran an abnormal course, and thus the accelerators were unopposed; and one of his pupils had demonstrated that the superior cardiac branch of the sympathetic often arose from the superior laryngeal nerve. But Dr. Grossmann thought that the following arguments told against Dr. Koch's theory: (1) The depressor nerve is centripetal; (2) the vagi remain intact; (3) the symptoms in question often arise when the operation has only been one-sided; (4) there is always an interval of some time between the performance of the operation and the development of the symptoms. Dr. Grossmann considers that these serious symptoms are not caused merely by the division of the nerves, but by changes occurring during the healing of the wounds. In order to test these theories Dr. Grossmann performed a series of experiments upon animals. He first ascertained that if the laryngeal nerves were simply divided very little change was noticed in the heart and circulation, but if the trunk of the superior laryngeal nerve was irritated two phenomena presented themselves—namely, rise of blood pressure and slowing of the pulse. As regards the condition of pressure in the left auricle and ventricle, irritation of the laryngeal nerve (carefully isolated) did not always cause a rise of pressure; very frequently the reverse condition ensued. Increased pressure in the left auricle caused congestion of the pulmonary circulation, and thus are explained the symptoms which Professor von Basch first drew attention to—œdema of the lungs and defective aeration of the blood. Phrenographic curves obtained by Dr. Grossmann in his experiments showed an increase in volume of the lungs even when both vagi were divided. In considering these experiments it must be remembered that an increase of blood pressure does not necessarily denote increase of work on the part of the heart; there may be other factors at work which paralyse the unfavourable influences acting on the heart, and this is probably the explanation of the fact that these symptoms do not always occur after extirpation of the larynx. From his researches, therefore, Dr. Grossmann deduces the conclusion already stated—namely, that the cardiac symptoms and ultimate failure are produced not by division of the laryngeal nerves, but by the irritation of the trunks of the nerves, produced by changes (not precisely determined) proceeding in the wound.

TRANSFUSION OF BLOOD IN POISONING BY COAL GAS.

ABOUT twenty years ago transfusion of blood was warmly recommended, especially in certain cases of anæmia and after inhalation of coal gas. The treatment then fell gradually into some disrepute, but is still occasionally recommended as offering a good chance of recovery. Of fifteen cases of inhalation of gas, collected by Landois in the year 1874, six terminated favourably, eight ended fatally, and one case remained doubtful after the transfusion. Some authors also recommend transfusion of a solution of common salt in place of blood, while others dispute the permanent effect of the salt and give the preference to transfusion of blood. Dr. Siegmund Löwenthal publishes in the *Medicinisches Centralblatt* a case from Professor Drasche's wards in the Imperial General Hospital at Vienna. A medical man, eighty years old, had inhaled coal gas during a whole night and was found the next morning in a state of coma, evidently due to poisoning by carbonic oxide. Attempts at resuscitation by artificial respiration and by applying galvanism to the phrenic nerve were unsuccessful, and the patient was then brought to the hospital. Here camphorated ether was first injected, and then a hypodermic injection of a solution of common salt was made into the abdominal and gluteal regions, but without any good result. Dr. Jahoda then ordered a transfusion of blood taken from the son of the patient, but no improvement was visible. Coma continued, and in two days the patient died. At the post-mortem examination cerebral atrophy was found, with softening centres in both lenticular nuclei and also on the anterior peduncle of the internal capsule. Numerous lobular and puriform centres of a pneumonic character were observed in the lungs, and the kidneys were atrophied. According to the cases published by Klebs, Simon, Ziemssen and Pölchen the appearance of the brain described by Dr. Löwenthal is characteristic of death from the inhalation of coal gas. The centres of softening in the large cerebral ganglia, chiefly observed in the middle and inner portions of the lenticular nucleus, are due to fatty degeneration of the afferent vessels and the consequent considerable contraction of their lumen. It is noteworthy that in the case related above the transfusion of blood did not meet with even temporary success. The pro-

table reason why all attempts at resuscitation failed was the patient's advanced age and the consequent want of elasticity in the bloodvessels. Dr. Löwenthal believes that the transfusion of blood in any case cannot have much effect in counteracting the poison of coal gas, as it does not change a sufficient quantity of the co-hæmoglobin into hæmoglobin itself, and the quantity of poison removed by the mechanical process is too small to be of much service. Transfusion of a solution of common salt is preferable, which, though increasing the quantity of liquids in the organism, also causes a considerable increase in the quantity of urine secreted. A necessary condition for a successful issue is a healthy state of the brain.

THE MEDICAL OFFICERSHIP OF THE GLASGOW POST-OFFICE.

WE understand that Dr. Dougan has been appointed to this post at a salary of £800 a year. The number of applicants for the appointment was very large, and included gentlemen from all parts of the United Kingdom. Dr. Dougan was lately medical officer of the Argyllshire District Asylum.

MEASUREMENT OF INTRA-TRACHEAL PRESSURE.

BY introducing a manometer tube into the trachea in patients who had had tracheotomy performed Dr. Aron has been able to note the intra-tracheal pressure under various circumstances. He found that inspiration is frequently divided into two portions, but that expiration is always continuous. In quiet breathing the manometer marked in inspiration from − 2·08 millimetres to − 6·65 millimetres of mercury; in expiration from + 1·23 millimetres to + 6·29 millimetres. In coughing the inspiration pressure was − 6 millimetres and the expiration pressure as much as + 46 millimetres.

THE REACTION OF NORMAL SWEAT.

HEUSS (*Monatsschrift für Prakt. Dermatologie*, Band xiv., Nos. 9, 10, 12) first cleansed the skin thoroughly with neutral fluids and then collected the sweat in a watch-glass and carefully tested it. He found the sweat of healthy men during rest to be normally acid; but when profuse perspiration occurred, as after the administration of pilocarpin or of boracic baths, it became neutral or even alkaline. The reaction of the sweat is to be distinguished from the acidity that a section of the skin presents in all parts of the body, which extends as far as the prickle cell layer, for even when the sweat is alkaline the skin may be acid. The normal acidity of the sweat is the product of the less acid or possibly even alkaline secretion of the sweat glands and of the acid and cutaneous fluid; and its increase of alkalinity when the secretion is strongly excited by pilocarpin or heat depends essentially on the relative proportion of the sweat to the cutaneous fluid.

THE ACTION OF STRYCHNINE ON LEUCOCYTES.

IN this epoch of what may be called the apotheosis of the leucocyte we turn from phagocytosis to be met by researches on the action of certain drugs upon the leucocyte or to special histological appearances of the leucocyte under certain well-defined conditions. Ehrlich has provided us with much material for speculation as regards the latter, whilst in a series of *brochures* on experimental researches upon the leucocytes, Dr. E. Maurel[1] has contributed most remarkable observations in respect of the former. Those who have made themselves acquainted with the earlier fasciculi in which he dealt specially with the action of heat and cold upon leucocytes, and have read the fasciculus in which he treats of the action of strychnine, curara, cyanide of potassium and hydrocyanic acid, will turn with interest to a similar series of researches on the action of strychnine, atropine, pilocarpine and cocaine. As regards strychnine, he maintains that the quantity of this drug required to kill an animal is equal to that required to kill the whole of the leucocytes in the body; and that the sensibility of an animal to strychnine corresponds exactly to the sensibility of its leucocyte to the same poison, and he holds therefore that in poison by strychnine the death of the leucocyte plays a most important part in the death of the animal. He finds that the same holds good in the case of atropine, and that in the case of the rabbit, which has such a well-known immunity from the action of belladonna, this immunity appears to be associated with the resistance of the leucocyte of the animal. This is a most important observation, and one that has a special bearing on questions that are being so vigorously discussed at the present day. As regards cocaine, he concludes that it brings about death either by saturation of the blood or by embolism; in the first case the cocaine apparently acts directly on the leucocytes, and the manner in which it poisons the animal corresponds very closely to that in which the other poisons act. In this book there is very much of interest from the purely biological point of view, whilst to the toxicologist and therapeutist it will probably prove exceedingly suggestive even when it is not more directly helpful.

[1] Recherches Expérimentales sur les Leucocyt s. Octave Doin, Paris, 1892.

FOREIGN UNIVERSITY INTELLIGENCE.

Budapest.—Dr. E. Jendrássik has been appointed Extraordinary Professor of Pathology, and Dr. Böke Extraordinary Professor of Aural Surgery.

Erlangen.—Professor Pechmann has been appointed Professor of Pharmacy and Director of the Pharmaceutical Institute.

Giessen.—Dr. Peter Poppert has been appointed Extraordinary Professor of Surgery.

DR. JOHN CHARLES STEELE, the Medical Superintendent of Guy's Hospital, died in that institution on Sunday, at the age of seventy-one. He was the author of "Vital Statistics of Guy's Hospital from 1854 to 1861," an "Analysis of Patients treated at Guy's Hospital from 1861 to 1868," "Hospital Dietaries," &c., and was Howard Medallist of the Statistical Society for 1876 for his "Essay on the Mortality of Hospitals Past and Present."

AT the quarterly meeting of the Medico-Psychological Association, to be held at Bethlem Hospital on the 17th inst., Dr. Walmsley will advert to some observations made at the annual meeting at York; the discussion on Dr. Savage's paper on "Influenza and the Neuroses" will be continued; and Dr. Mercier will read a paper on "Payment of Patients for their Work."

A MEETING of the British Medical Temperance Association will be held in the rooms of the Royal Medical and Chirurgical Society on the 15th inst., when a paper will be read by Dr. Norman Kerr on Stimulants in Workhouses and a discussion on Children and Alcohol will be opened by Dr. Heywood Smith.

THEIR Royal Highnesses the Prince and Princess of Wales, who will be accompanied by the Duke of York, will on Dec. 14th open the new wing of St. Mary's Hospital, Paddington, which has been erected and named in memory of the Duke of Clarence and Avondale.

MR. WILLIAM ST. CLAIR SYMMERS, M.B., C.M., has been appointed Pathologist to the Aberdeen General Hospital.

THE annual dinner of the Bristol Medical School will take place at the Royal Hotel, College Green, on Wednesday, the 16th inst. Sir Andrew Clark will occupy the chair on the occasion of the formal opening of the new medical wing at University College.

THE Grocers' Scholarship Lecture on "The Physiology and Pathology of Blood Destruction" will be delivered by Dr. William Hunter in the theatre of the Examination Hall, Victoria Embankment, at 4 P.M. on Tuesday, the 22nd inst.

THE next half-yearly dinner of the Aberdeen University Club, London, will be held at the Holborn Restaurant on Wednesday, Nov. 16th, at 7.30 P.M., Professor Ferrier, M.D., LL.D., F.R.S., in the chair.

THE trustees of the "George Henry Lewes Studentship" have elected Mr. J. Sydney Edkins, M.A., M.B., Senior Demonstrator of Physiology in the Owens College, to that foundation.

THE Royal Portsmouth Hospital has just received from the Mayoress of that town the sum of £132 10s. 11d., the proceeds of an entertainment given by her in aid of the hospital.

THE medical officers and instructors of the Volunteer Ambulance School of Instruction will hold their annual dinner at Cannon-street Hotel at 7 P.M. on Saturday, Dec. 10th.

SIR JAMES PAGET delivered a short inaugural address at the Oxford Medical Society, which held its first meeting in the University Museum on the 11th inst.

THE Westminster Hospital students' dinner will take place at the Criterion on Tuesday, Nov. 15th. Mr. James Black, F.R.C.S., will occupy the chair.

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA.

THE third session of the Congress was opened in Sydney on Monday, Sept. 26th, at 11 A.M., in the great hall of the University. The roll comprised 534 ordinary members, twenty-six honorary members and forty-three student members. The principal office-bearers were: Dr. P. Sydney Jones, President; Dr. T. Chambers, Treasurer; Dr. Anderson Stuart and Dr. S. T. Knaggs, Joint General Secretaries. The opening meeting was crowded, and was attended by the Governor, the Premier, the Primate and large numbers of the principal citizens, for the interest taken by the general public in the conference had been most keen. The Governor (the Earl of Jersey) welcomed to Sydney "men of that great science to which all men some time or other turn with many feelings of hope, at other times with fear, and always with gratitude," and said: "When they put their fingers on the pulse of Sydney, they would find it respond with an even and healthy beat to every sentiment of kindness and hospitality." Professor Anderson Stuart then read the report of the executive committee, which gave a brief *résumé* of the steps which had been taken since the second session at Melbourne in 1889. The report was adopted on the motion of Drs. Verco of Adelaide and Bright of Hobart. The Premier (Sir George R. Dibbs, K.C.M.G.) then followed up the kindly welcome which had been given by the Governor, and said that it struck him that it was "a most pleasing circumstance that amidst all the turmoil and storm—socially, commercially and politically—so large a number of medical men should have left their avocations in every colony to meet in Congress for the discussion of so many questions affecting the welfare of humanity as are embraced in the programme." The President then delivered his inaugural address, in which he dwelt on the advances which had been made in medical science and art during the last forty years, the period during which he had been connected with the profession. At the conclusion of these proceedings the Governor announced that the Government would undertake the publication of the proceedings of the Congress, an announcement which was received with cheers. The meeting was then adjourned till the evening. In the afternoon the Mayor and Mayoress held a reception in the Town Hall, which was tastefully decorated with palms, ferns and flowers, and looked very fine. The great organ was played at intervals, refreshments were served, and the afternoon passed very pleasantly. The evening meeting was held in the Great Hall of the University and was entirely devoted to the discussion of the manner in which the executive had been appointed, and some very plain speaking was indulged in. In order to bring the matter up it had been arranged that Mr. Tarrant should move for a committee to consider and report on a matter of procedure to regulate the preliminary steps for future meetings. Mr. Tarrant, in moving for the committee, made upon this occasion an exceedingly even and temperate address; but, unfortunately, those who followed him gave free expression to their feelings. It was, however, quite apparent that the discontented party had no sympathy from the meeting, and the executive and that side of the house thought it best, in the interests of peace, to make no reply of any sort. The speaking was therefore all upon and for one side; but the voting was very different, for on division the discontented party was hopelessly out-voted. No regular counting was done, but it seemed to the writers that the minority was about 36, while the majority was considerably over 200. When once this matter had been got over nothing further occurred to mar the harmony of the session, which continued from day to day without a hitch. The weather on five out of the six days was simply perfect, so that the numerous outdoor festivities and excursions were not interfered with except in one unimportant case. The meetings of the Sections and Subsections were held in the various theatres of the medical school, which, being all in one corridor, were peculiarly suited to the purpose, for they followed in numerical order—(1) Medicine, in the Harveian Theatre; (2) Surgery &c., in the Hunterian Theatre; (3) Midwifery &c., in the Hallerian Theatre; (4) Public Health &c., in the Cullenian Theatre; and (5) Anatomy and Physiology &c., in the Vesalian Theatre; the subsections of diseases of the eye, and of the ear, nose and throat, in the smaller rooms. The papers were plentiful, over 160, and upon the whole of good quality. The impression is that they were decidedly better than at the last meeting. The Section sat usually from ten till one.

A *résumé* of the proceedings of the Sections will be given later on. On Tuesday afternoon the Governor and the Countess of Jersey gave a garden party at Government House. There were from 700 to 800 present, and the weather being delightfully fine the visitors greatly enjoyed themselves. On Wednesday afternoon, at the invitation of the Government, the members and their friends were conveyed in their steamer down the harbour to the quarantine station. Excellent refreshments were provided and again the weather was delightful, so that all returned well pleased with the outing. In the evening the President entertained about 400 at dinner in the Town Hall, and, in responding to the toast of his health, the Governor took occasion to say a few words on the necessity of upholding law and order. It is not often that governors in these colonies are called upon to speak on such topics, but the circumstances of the hour in Australia made his words most timely, and they were received by the lay assemblage with enthusiasm, testified by applause. On Thursday his Excellency was present to hear the presidential address in the Public Health Section, and afterwards visited the Section of Surgery; the question of hydatids was under discussion. In the afternoon a large party visited the Leper Hospital, where many of the visitors saw leprosy for the first time. The various forms of this disease were demonstrated by Dr. Ashburton Thompson. There are about twenty cases detained here, including two females and seven males, natives of Australia, of European descent, besides eleven Chinese, one Japanese, one Kanaka. The arrangements at the Leper Hospital are very complete; two wardsmen attend the males, two nurses the females, and in every way—by comfortable quarters, on a charming site overlooking the ocean, cheerful furniture, liberal dietary and allowances of "medical comforts"—the lot of the leper is tempered. In the evening the

orchestral concert to which the members were invited proved a most enjoyable treat. On Friday afternoon there was a harbour party to view the gardens and grounds of Gladesville Hospital for the Insane, probably the finest flower garden in Australia. Here also the park, with its herds of emus, kangaroos and wallabys, was most interesting. As good luck would have it, the final heat of a great sculling race was witnessed from the steamships, which then proceeded to the Thomas Walker Convalescent Hospital, which is approaching completion as a memorial to the late Thomas Walker. In the evening a conversazione, which was given by the members of the Congress, was held in the great hall of the University. Elaborate preparations had been made and the gathering proved a great success. The great hall was used as a museum, concert hall and refreshment room. The grounds were illuminated, and the chemical, physical, engineering, biological and geological laboratories, as well as the medical school, library, Nicholson museum, and, in fact, all the University buildings, were thrown open and lecturettes and demonstrations given and experiments conducted. About 1400 persons attended. On Saturday the final meetings of the Congress were held in the Harveian theatre, and a great deal of business was done, which we shall report hereafter. At noon a harbour excursion was given by the Congress to May Fern Bay, where luncheon was served; afterwards the visitors proceeded by steamers to some of the more beautiful reaches of the harbour. In the evening Drs. Chambers, Knaggs and McCormick entertained over 200 members at dinner at the Australia Hotel. Good music was provided instead of speeches till midnight, when the company separated after singing "God save the Queen." With that we conclude a general account of the proceedings. A *résumé* of the work of the various Sections as supplied by the sectional secretaries follows.

SECTION OF ANATOMY, PHYSIOLOGY, PHARMACOLOGY AND PATHOLOGY.

The presidential address was delivered by Professor H. B. Allen, University of Melbourne. The address was devoted to a comprehensive survey of recent progress in the subjects comprised in the Section. In special reference to the progress of pathology, the President reviewed at some length the modern doctrines relating to immunity, furnishing a critical exposition of various divergent views and indicating the lines of possible further advance, both in the investigation of the problems involved and in the therapeutical application of the principles elucidated. In connexion with the subject of anatomy the following were brought forward:—

Observations on the Normal Position of the Vermiform Appendix, by Drs. G. E. Rennie and Cecil Purser. In the paper Drs. Rennie and Purser communicated the results of their observations upon 100 subjects, partly confirmatory of and partly at variance with the results of other recent observers.

On Recent Progress in Microscopic Construction, with Demonstration of Modern Microscopic Apparatus, by Dr. Gustav Lennhoff. The speaker dealt fully with the principles of the improvements in microscopical objectives, oculars and illuminating apparatus, as illustrated in the apochromatic lenses and compensating oculars and substage optical systems of Zeiss, together with the other mechanical accessories of the modern microscope.

On Two Cases of Congenital Malformation of the Heart, by Dr. John Morton, Demonstrator of Anatomy, University of Sydney. The first case was one of entire absence both of pulmonary artery and ductus arteriosus; while the second case exhibited entire absence of left ventricle and of aortic orifice, the proximal part of the aortic arch being present as an attenuated but pervious cord, constituting a common trunk for the coronary arteries.

On the Closure of the Central Canal of the Spinal Cord in the Fœtal Lamb, by Professor J. T. Wilson, University of Sydney. In this paper the author adduced certain observations in support of the theory of the mode of production of the lumen of the central canal maintained by Balfour for chick embryos, and subsequently criticised adversely by other writers.

Exhibition of a Skeleton of a Dwarf; forwarded by Professor Watson, University of Adelaide, accompanied by notes on the life-history and chief features of the case.

Dr. Lockhart Gibson (Brisbane) read a paper on the Functions of the Thyroid Gland with observation on a case of Thyroid Grafting, in which he insisted that the proof against the alleged blood-forming function of the thyroid is sufficient. The history of the patient was adequately demonstrated by a series of photographs, showing the gradual advance of myxœdema for the first four years of life, and the very marked and steady improvement following the grafting of the thyroid of a lamb, which grafting took place in the fifth year—i.e., two years ago. Dr. Gibson also gave an account of the subsequent history of the lamb used, from which he imagined he had removed the whole gland. This animal showed no signs of cachexia eight months after the operation. It was then killed, and it was found that a small piece of the lower end of one lobe had been left. This had hypertrophied and carried on the essential function of the thyroid; sections made from this portion remaining showed a remarkable scarcity of lymph follicular tissue, but were otherwise of normal appearance.

Dr. C. J. Martin read a paper on the Effect of Food on the Secretion of Bile in Man, in which he showed that in the case observed there was a very marked increase in the rate of secretion, commencing about two hours after the ingestion of food, reaching a maximum four hours after and then rapidly declining. "Curves of flow" taken by allowing the bile to flow into a cylinder on the surface of the fluid in which was a specially devised form of float, the movements of the latter being registered on a revolving smoked cylinder, were shown. From a number of these curves Dr. Martin had differentiated a mean "curve of speed of flow" from which he derived his conclusions. The paper also contained an analysis of human bile from a fistula and remarks concerning the composition of fistula bile.

The President (Professor Allen) and Dr. T. Cheery contributed a short paper on the general plan of teaching practical pathology in the University of Melbourne, the notable feature being a course of practical bacteriology, "consisting of two hours' work twice a week for five weeks," that every medical student must attend.

Dr. J. Lockhart Gibson read a paper on a case of Pernicious Anæmia in a man aged fifty-six, in which he described red cells of various sizes, shapes and structures, resembling and—the speaker implied—even homologous with cells already described by him in his account of the development of the blood-cells in the bone marrow of the dog. He therefore concluded that pernicious anæmia had to do with defective or perverted production rather than excessive destruction of red cells. He also observed that, at least in old age, there is a rapid destruction—solution, as it were—of the red cells in the blood after it has left the vessels. This secondary destruction of cells may be a source of fallacy.

Dr. G. E. Rennie contributed a paper on Healed Pulmonary Tuberculosis.

Dr. W. Camac Wilkinson, Secretary to the Section, gave a demonstration of the bacteriological tests for the diagnosis of Asiatic cholera in suspicious cases, and exhibited pure cultures of pathogenic and other organisms, including those of the fowl as well as of human tubercle, tetanus, glanders and favus.

Through Dr. Wilkinson Mr. C. J. Pound showed beautiful growths upon agar and gelatine of the actinomyces fungus obtained directly from cases of actinomycosis, a disease very common in cattle in Australia; and Veterinary Surgeon Park (Tasmania) showed excellent microscopic specimens of the mycelium and clubs of the actinomyces, sometimes in combination, sometimes one or other alone. In one case of Mr. Park's a packing-needle, swallowed and transfixing the wall of the stomach, had become the starting-point of an extensive actinomycotic growth—a case of great etiological interest.

SURGERY.

The Section of Surgery sat four days, under the presidency of Dr. W. Gardner of Melbourne.

On the first day Dr. A. Shewen (Sydney) opened a discussion on Anæsthetics. He believed that the statistics possessed on such a subject were of little value and that for the future they should endeavour to follow the example which England had set them and establish their own clinical history. This he did not think should be compiled by the anæsthetist, but by a bystander, for fear that the unavoidable mental preoccupation might interfere with the safety of the patient. In the case of the medical school it should be done by students. In regard to the question of ether *versus* chloroform, he thought that each possessed advantages which are wanting in the others. A discussion followed in which eighteen speakers took part.

Dr. Springthorpe (Melbourne) thought that a large per-

centage of fatal cases was due to maladministration and advocated for the lighter forms of operation the use of what he termed *cortical* anæsthesia. This statement met with opposition from various speakers, who thought that the patient should be under the full influence of the anæsthetic, and that *cortical* anæsthesia should be confined to certain cases of midwifery.

The President, in closing this discussion, recognised the importance of the personal equation of the anæsthetist. As an operating surgeon he felt that with certain individual anæsthetists his mind was at ease, whilst with others he felt in constant anxiety.

Dr. MacCormack exhibited a case of Rhinoplasty operated on by the Indian method of the frontal flap, with this important modification: that before bringing the flap down he had prepared a cutaneous lining from the inside of the nose by raising two small flaps of skin on each side of it.

Mr. Cleghorn (New Zealand) read a paper on the Treatment of Acute Purulent Synovitis by washing out with Peroxide of Hydrogen; also on the Treatment of Chronic Abscess by Baker's Method.

Dr. Syme (Melbourne) followed next with a paper on Ganglion. As a result of numerous dissections and pathological observations he had come to the conclusion that in cases of simple ganglion rupture or incision might suffice, but that in cases of compound ganglion free removal of the diseased sheath was the only treatment advisable.

Mr. Poulton gave his experiences of Two Cases of Ankylosis of the Lower Jaw treated successfully by excision of the condyle.

On the second day the President delivered his address, an eloquent and exhaustive review of Modern Surgery. This was followed by a paper of Mr. G. E. Twynam (Sydney) on an Operation for Treatment of Dislocation of the Acromio-Clavicular Joint, and by one of Dr. F. Bird (Melbourne) on the Radical Cure of Hernia by a New Method.

The meeting was closed by the exhibition of a woman operated on two years ago by Dr. MacCormack (Sydney) for Scirrhus of the Pylorus. This extended for two inches within the first part of the duodenum, and was excised by Dr. MacCormack according to the Billroth method. The patient has enjoyed good health ever since, and does not present any sign of recurrence of the disease.

The third day was devoted exclusively to Hydatids—a subject of particular interest to Australian surgeons and physicians. After reading many papers an important discussion took place between the advocates of treatment by aspiration in the case of simple abdominal hydatids and those who in all cases prefer the radical cure by incision.

Dr. Verco read a suggestive paper on the Treatment of Hydatids of the Brain. He proved that one-third of all cases of hydatids of the brain communicate with the lateral ventricles, and as a result a large percentage of the fatal cases is due to draining the cerebro-spinal fluid and leaving the ventricles dry. To obviate this, he suggested that in future, after emptying the cyst through a trephine hole and washing out as usual, no drainage-tube should be left, and that the flap should be closely stitched and thus the cavity left hermetically sealed.

Mr. Spencer (Bathurst) made known the fact that he had treated two cases of abdominal tumours due to the Bothriocephalus liguloides, of which one died and the other recovered. This is the first time that the presence of such a parasite has been recognised in Australia.

On the fourth day Colonel-Surgeon Williams (Sydney), in a paper on Military surgery, dealt with the characters of wounds caused by the new magazine rifle bullets. Two new methods of subcutaneous wiring for fractured patella were explained—one by Mr. Fitzgerald (Melbourne) and the other by Mr. Twynam (Sydney).

The treatment of Talipes also excited an interesting discussion between the tenotomists represented by Dr. Milford (Sydney) and those who believe that in certain severe and intractable cases bones should be altered in shape either by drilling according to Mr. Fitzgerald's method or by simple osteotomy. The question of tracheotomy in diphtheria was introduced by Mr. Clubbe (Sydney), who in 120 tracheotomies performed at the Sydney Hospital for Sick Children obtained 51 recoveries, and by Dr. Crago (Sydney), who out of 19 operations had 10 recoveries. Dr. A. Jefferis Turner (Brisbane) advocated intubation of the larynx and gave an account of 19 cases treated by such a method with 7 recoveries. Dr. F. Bird (Melbourne) ended the meeting by reading a case of injury to the median nerve due to a gunshot wound, in which a portion of the sciatic nerve of a cat was grafted, with restoration of function.

The papers read were only one-half of those entered in the Section of Surgery, there being other twenty-eight papers that, through want of time, had to be taken as read.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

The President, Dr. Balls Headley (Melbourne), delivered a philosophic address on the Evolution of Disease in Woman and the Influence exerted by Civilisation, pointing out how the conditions of modern life evolve diseases in women which cause sterility, and thus limit the population as certainly, although to a less degree, as polyandry and other expedients of savage nations. Dr. Headley, as a sequel to his address, read a paper on the Treatment of the Inflammatory Affections of the Uterus and Appendages, laying special stress on the necessity for closing lacerations of the perineum or cervix, especially of the latter in view of the frequency with which cancer attacks cervices which have been lacerated, also for establishing thorough drainage in endometritis and stenosis of the cervix by dilating with Hegar's dilators and curetting. Dr. Headley's views met with general acceptance from the members present.

Dr. Camac Wilkinson (Sydney) read a paper on Some Questions affecting Obstetrical Practice, in which he deprecated frequent vaginal examinations during labour and also the frequent use of the forceps, while he strongly advocated the immense advantages of external palpation.

On this latter subject Dr. Dick (Sydney) also read an able paper.

Dr. Pinnock (Ballarat, Victoria) brought forward a New Method of Operating for Large Ventral Hernia, which consisted of splitting the sheaths of the recti muscles and bringing the muscular fibres together instead of the tendinous structures. In this operation the peritoneum is not opened. The results had been very good.

Mr. Cleghorn (New Zealand) read notes on a case of Ovarian Abscess producing symptoms simulating those of ectopic gestation.

Dr. Worrall (Sydney) showed Ectopic Fœtuses, successfully removed by abdominal section; one was removed during a superadded normal pregnancy. Three of the patients had since gone through subsequent pregnancies normally. He also read a note on Trendelenburg's position.

Dr. MacSwiney (Sydney) read notes on two instances of Protracted Gestation in the same patient. Her second pregnancy lasted 330 days from last menstruation, and in her third pregnancy labour was induced 298 days after. He considered inertia of the uterus to be the chief cause.

Dr. Thring (Sydney) brought forward four cases of Vaginal Hysterectomy for Cancer. All had recovered from the operation, but return had taken place within two years in two cases. He urged early removal.

Mr. Foreman (Sydney) showed a remarkable specimen of Fibro-cystic Disease of the Uterus involving the whole organ and having its lower portion extruded through the crevice. He had performed total extirpation of the whole uterus by abdominal section.

There were other valuable papers on Vesico-vaginal Fistula, by Dr. Fitzgerald (Melbourne); Dilatation and Curetting of the Uterus, by Dr. J. A. G. Hamilton (Adelaide); Pessaries, by Mr. Edgelow (Sydney); Surgical Treatment of Uterine Tumours, by Dr. Leichelmann.

PUBLIC HEALTH.

An introductory address was delivered by the President, Dr. Whittell (Adelaide), in the presence of his Excellency the Governor (the Earl of Jersey). Dr. Whittell's subject was a comparison of the health codes of various colonies with the practical results attained under them. In the course of a very interesting paper he showed that the means and results were incommensurate, and traced the defect to general apathy and pressure of local interests as regards the local authorities charged to execute the laws on the one hand, and, on the other, to lack of power vested in a central authority to step in and compel the local bodies to do their duties. The most important of the thirteen papers read in this Section was that by T. A. Coghlan, Esq., Government statistician, on a Life Table for New South Wales, which he has just deduced from the results of the census of 1891, and the mortality of the two years ending March 31st, 1892, the results being adjusted according to the system devised by Mr. W. S. B. Woolhouse. Mr. Coghlan showed that the expectation at birth was: males 49·6 years and females 52·9 years, and that it was highest at two years

of age, when the expectations were respectively 56·37 and 58·74 years. These figures are much higher than those given in Dr. Ogle's table for England—a result which, as Mr. Coghlan properly pointed out, is probably due to the more favourable conditions under which the inhabitants of a new and not yet overcrowded country are brought up.

Dr. David Hardie (Brisbane) contributed a remarkable paper, in which he compared the varying number of deaths from several diseases at different seasons of the year with the meteorological conditions observed at those seasons in each of eight districts into which he divided the whole colony for this purpose. A chart which must have taken many weeks to prepare showed in graphic form the remarkable coincidences which he desired to point out.

Dr. Bancroft (Brisbane) contributed a paper on the History of Leprosy in Queensland, from which it appeared that the earliest recorded and known case occurred in 1866 in a German who had long lived in Hawaii; and Dr. Bancroft, after searching hospital records, is convinced that several undiagnosed cases in Europeans occurred later than the year named.

Other papers of importance were a Note on Worm-nests occurring in the Cellular Tissue of the Brisket of Cattle, by Dr. Gibson (Windsor, N.S.W.); Registration of Stillbirths and Protection of Infant Life, by Dr. G. L. Mullins (Sydney); the Diseases of Samoa (among which leprosy does not appear, only one visitor, a Hawaiian, having ever suffered), by the Rev. Dr. S. H. Davies (Tutuila), medical missionary; the Course and Cause of Influenza, by Dr. Carstairs (Geelong, Victoria); and remarks on Tubercular Phthisis, by Mr. G. L. Lawson (Gosford, N.S.W.). Other papers were contributed from New Zealand and Thursday Island; and all but one or two were of important practical interest. Lunacy was taken in this Section, one day being devoted to the subject.

Dr. Chisholm Ross, of the Asylum for Imbeciles at Newcastle, N.S.W., spoke of the statistics of insanity in relation to the census of 1891, and concluded that the proportion of cases to population was diminishing, and was specially small amongst the native born.

Drs. McCreery and Stele (Kew) and Dr. Rosenblum (Yarra Bend, Victoria) read papers on Juvenile Insanity, Hydrocephalic Idiocy and General Paralysis, in which latter Dr. Macandrew of Hokitika, N.Z., also joined.

The most interesting transaction in this department was a discussion on Criminal Responsibility of the Insane, which was introduced by Drs. Springthorpe and Mullens (Victoria).

Dr. F. Norton Manning, Inspector-General of the Insane, N.S.W., made an important contribution; and a committee was appointed to consider the form which a resolution on the subject, to be presented to the general Congress, should take.

The following resolution from Section 4 to the Congress was adopted at the general meeting: "That in view of the fact that the present recognised legal test for insanity is false in theory and unsatisfactory in practice, and that the legal authorities have expressed a desire to obtain an expression of medical opinion upon the subject, this Section submits for ratification by the General Congress the following resolutions:—1. That it is impossible to frame any one test for insanity in criminal cases which is capable of general application. 2. That for criminal cases it would be in accord with present medical opinion to define insanity as a disease of the brain affecting the intellect and also the emotions and the will, not immediately induced by the default of the individual, leaving the following questions for the jury:—(*a*) Had the accused at the time of committing the act such disease of the brain? (*b*) If so, did such disease prevent in relation to the alleged crime—(1) a knowledge of the nature and quality of the act he was doing—(2) a knowledge that the act he was doing was wrong (illegal)—(3) a free determination of his will?

MEDICINE.

The work of this Section began on Tuesday, Sept. 27th. Dr. James Robertson, consulting physician to the Melbourne Hospital and formerly lecturer in medicine in the Melbourne University, took the chair as president of the Section, and delivered an interesting address dealing mainly with the administration of chloroform as an anæsthetic. He took occasion to criticise the result of the Hyderabad Chloroform Commission. He gave a summary of his own experience, extending over forty-five years, and pointed out the practical importance of observing the pulse as well as the respiration.

Dr. John Gibson (Windsor, N.S.W.) read a paper on a case of Progressive Muscular Atrophy with unusual Cord Lesions, illustrated by sections of the cord shown by Dr. Quaife by means of a projecting microscope and electric light.

On the 28th Mr. James Ryan (Melbourne) contributed a paper on the Etiology, Prevention and Treatment of Phthisis, which evoked a lively discussion.

Dr. Jeffries Turner read a paper on Chronic Lead Poisoning among Children in Brisbane, contributed by the Hon. Staff and Resident Surgeon to the Hospital for Sick Children in that city. He dealt with numerous cases attributed largely to the "tinfoil wrapping of sweetmeats." A discussion ensued.

On Thursday, the 29th, the first business was a paper by Dr. Fleming (St. Arnaud, Victoria) on Two Cases of Empyema in Children mistaken at their onset for cases of peritonitis. The cases were marked examples of absence of pleural symptoms during the early stages of the disease, and presence of violent abdominal symptoms, marked tympanites and extreme pain. A discussion followed.

Mr. Bickle (South Australia) read a paper on Diabetes, with a case of recovery from diabetic coma by the use of oxygen.

Dr. Molloy, medical superintendent of the Melbourne Hospital, contributed a paper entitled, "Is Beri-Beri endemic in Melbourne?" The cases were those of a number of Chinamen simultaneously attacked by the disease while working in the same workshop. The symptoms were those of peripheral neuritis *plus* œdema, beginning in the lower limbs and becoming more or less general. An interesting discussion took place, from which it appeared that somewhat similar cases were found among the Chinese in Sydney.

On Friday, the 30th, a discussion took place on the subject of the Treatment of Snake-poisoning by Strychnine. In the absence of Dr. Mueller, the author of this method in Australia, a paper by him on the subject was printed and circulated among members. Dr. Huxtable read a paper dealing statistically with the result obtained among cases so treated. An interesting discussion on the whole subject was interrupted on account of stress of other business.

Dr. Struthers contributed a paper on Some Points in Connexion with Small-pox. The paper contained many original observations, especially on the characteristics of the various initial rashes. Owing to lack of time this paper did not receive the discussion which its merits deserved.

Dr. Fleetwood (Warmambool) read a paper on Chlorosis, of value as a record of personal experience in treatment.

Mr. Springthorpe (Melbourne) read a paper on Eighteen Months' Experience with Tuberculin, in which he recorded his extensive experience of this method of treatment in phthisis with considerable success. Owing to lack of time the following papers which had been contributed to this Section were taken as read:—

1. Spinal Irritation, by Dr. Jarvie Hood (Sydney). 2. A Form of Cerebral Disease characterised by Definite Symptoms, probably a Localised Basic Meningitis, by Dr. Jefferis Turner (Brisbane). 3. Hypnotic Suggestions and their Therapeutic Value, by Dr. Arthur (Sydney). 4. Treatment of Asthma, by Mr. Turner (Melbourne). 5. Rötheln, by Dr. Patrick Blackall (Queanbeyan). 6. Notes on the Occurrence of Anchylostomum Duodenale in Queensland, by Drs. Lockhart Gibson and Jefferis Turner (Brisbane). 7. Pearl Diving from a Physician's Point of View, by Dr. Salter (Thursday Island). 8. Notes on a case of Syphilis of the Heart, by Dr. Fiaschi (Sydney). 9. The Treatment of Hepatic Colic by large Doses of Olive Oil, by Dr. Sydney Jones (Sydney). 10. A case of Chylous Ascites, by Dr. Lendon (Adelaide). 11. On the supposed relation between Human Diphtheria and an Outbreak of Disease which was very fatal among swine in Geelong last year, by Dr. Paynter-Sloggett (Melbourne). 12. Remarks on 750 cases of Skin Disease, by Dr. A. W. Finch Noyes (Melbourne). 13. Reclamation of Nailbed and Treatment of Hirsutes by Electrolysis, by Dr. Herman Laurence (Melbourne). 14. Movable Kidney, by Dr. Dunbar Hooper (Melbourne). 15. Sequel to a case of Cerebellar Tumour, with exhibition of specimen, by Dr. Maudsley (Melbourne). 16. The Electro-neurotome, a new method of applying electricity, by Dr. O'Neill (Sydney). 17. Disinfection of the Alimentary Canal, by Dr. Creed (Sydney).

MEDICAL MAGISTRATES.—Mr. Thomas Walker, M.R.C.S., Wakefield, Dr. John Roberts, Chester, and Mr. James Taylor, F.R.C.S., L.R.C.P.Lond., L.F.P.S.Glasg., also of Chester, have been placed on the Commission of the Peace for the West Riding of the County of York and the City of Chester respectively.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

THE reports this week as regards cholera are satisfactory. The warm weather which prevailed a few days ago seems to have given rise to a slight recrudescence of the epidemic generally, but it was of a very temporary character. At Hamburg the disease has ceased, and we learn from Berlin that the Ministry of the Interior has issued a circular cancelling all the special regulations enacted with reference to passenger and goods traffic with Hamburg, as the gradual and almost complete disappearance of cholera in that city justifies the abandonment of restrictive measures. From the Hague we learn from the official cholera bulletin that there have been only 27 deaths from the disease throughout the country during the week ending the 7th inst. Of these, 5 occurred at Ysselsteyn, in the province of Utrecht, 3 in the town of Utrecht, 5 at Breda and 3 at Huissen, in Gelderland. Four cases of cholera are reported from Rotterdam as having occurred among the crew of a fishing boat that arrived at Maassluis on the 4th inst. The outbreak at Breda was attributed to the infection of the water-supply, but the evidence on which this conclusion was arrived at is not stated, and there is always a disposition to assign any cause that may for the moment be plausible or popular without any due investigation. There is no doubt as to the important part played by a foul and contaminated water-supply in cholera, but the facile process of labelling an outbreak with this as the cause is too tempting to be resisted. It saves time and trouble, and is often promptly done without any pretence to exact inquiry. The Sanitary Board of the river Scheldt have decided that arrivals at Antwerp from Dutch ports, including Amsterdam and Rotterdam, shall only undergo a medical inspection and twenty-four hours' observation. In the case of French vessels, however, the existing regulations remain in force. At Budapest the disease has decidedly diminished; for whereas the seizures were, at the time of our last week's report, from 20 to 30 daily, they have now decreased to 8 and 10 in the twenty-four hours; 9 cases of cholera and 3 deaths occurred on the 6th inst., on a farm in the village of Szecsany in Hungary. It is as to the origin and causes of a limited outbreak of this kind in a village that we require precise information, for the exact circumstances and conditions should be capable of being unravelled by investigation. At Monville, near Rouen, there were 4 cases of cholera on the 6th inst., of which 3 terminated fatally; at Liege 5 deaths from cholera have occurred up to the present, and 7 cases are still under treatment. Five fresh cases of cholera and three deaths were reported at Brussels on the 5th inst. from the suburb of Molenbeck. At St. Petersburg sporadic cases of cholera continue to appear; on the 5th there were 4 fresh cases, and on the following day (6th) 7 cases and 1 death occurred. The disease has not only greatly declined, but its severity is less; there are fewer fatal cases. Cholera is still prevailing in Persia, at Ispahan, and in the villages round Shiras.

A brief but interesting account of the cholera epidemic in St. Petersburg is published in the *Medical Magazine* for the present month, from which we glean the following information. The disease was first officially notified as present in Astrakhan on June 18th and at Nijni Novgorod on July 11th. Moscow first appeared in the official list on July 24th and St. Petersburg on Aug. 1st. St. Petersburg is built partly on the banks of the river Neva and partly on a series of islands at its mouth. No part of the Russian capital lies more than a few feet above the sea level, and the level of the ground water in St. Petersburg varies greatly. The water-supply is derived from the Neva at a point within city limits, and is consequently liable to pollution. The sewage is distributed over the fields in the neighbourhood and is not openly discharged into the river. It appears that, as early as July 20th, a number of patients suffering from diarrhœa and vomiting, attended in some cases with cramps were admitted into hospital. Up to July 29th, however, no comma bacilli had been found in any of the cases examined. These were discovered in the dejecta of a patient who was attacked on the 24th and died on the 25th of July. On Aug. 1st there were 21 cases and 13 deaths recorded in the official list; and from this date the number slowly increased, the highest number of new cases being 156 in the twenty-four hours ending at noon of August 17th.

Many objections have been urged from time to time against the acceptance of the comma bacillus as *the* cause of cholera, and it must be confessed that some of them have much force. It must be remembered that the medical profession and sanitarians, both here and on the Continent, have had experience of previous epidemics. As John Stuart Mill remarked, it often happens that as one portion of the truth rises another and older portion sets, and previously recorded observations and deductions are apt to be entirely lost sight of later on. We sincerely trust that efforts will be made at the present time, not only to reach the substratum of facts, but to bring them into harmony with the latest views by bacteriological and other investigations. *En passant* we may here refer to the proposal of the Government of the Hague to provide a special grant for the purpose of instituting scientific inquiries in this respect. Cholera exhibits many different manifestations: it is endemic, epidemic and sporadic. It is not at all an uncommon occurrence at certain seasons, in India, for example, for one case of cholera, and one only, to appear and prove fatal in a small community of persons living with all things in common; and there are numerous instances of isolated limited outbreaks of the disease which have arisen and terminated in a few days. If the comma bacillus be a specialised object and only to be differentiated from other bacilli of similar appearance by cultivation tests, it is confessedly difficult to understand how its presence originated these occurrences, and how it had such a limited range of action. The relation of cholera to season, place and soil also requires further elucidation. That there are several places which have hitherto escaped cholera, notwithstanding the extent and frequency of their communications, indicates that the spread of the disease is subordinated to some complex agencies which have not yet been demonstrated or thoroughly explained. Cholera spreads along rivers, and low-lying districts and neighbourhoods are its favourite habitats. While it has some etiological affinities with typhoid fever it has also others with malaria as regards its connexion with porous soils, heat and moisture, and the want of proper subsoil drainage with superadded soil contamination. The broad facts have a certain bearing on Pettenkofer's well-known ground water theory. We would here call attention to the instructive cholera and typhoid fever maps of Havre illustrating the text of our special correspondent's communication regarding cholera in France. The prejudicial effect of recent constructions which served as dams to check the natural flow of the subsoil water, where the subsoil was constantly contaminated by the *bétoires*, on districts of the town which were previously healthy, is strikingly set forth, and might be easily paralleled by similar examples in other countries. In tropical and semi-tropical countries, where similar constructions, or the erection of railway embankments, have checked the natural flow of the subsoil water and given rise to a waterlogged condition, the liability to malarious disease has vastly increased; and where animal and sewage filth has been superadded to the moisture, other diseases, such as typhoid fever and diphtheria, have manifested themselves. It may be regarded as a sanitary axiom that there is a close connexion between the prevalence of cholera in a population and the unwholesome and contaminated water-supply with which that population is provided; but because this is established it will not cover the whole ground, for cholera indubitably may and does attack persons whose drinking water is good. It is apparently the case that the use of impure water of any kind in times of cholera prevalence may excite and precipitate an attack of that disease. In some of these cases it is a matter of extreme difficulty, if not of impossibility, to explain how the water obtained its specific infection. Bacteriologists do not seem to have yet determined the exact stage of the disease at which comma bacilli can be discovered in the dejecta. All seem agreed that these cannot be found in the blood or organs and tissues of the body generally; and the statements of Dr. Koch and Dr. Klein are at variance as to the number of comma bacilli being in proportion to the virulence and rapidly fatal issue of the cholera attack, for the latter says that in these speedily fatal cases they are found in small quantities only if the post mortem examination be made very soon after death. Many of these points should be capable of being cleared up by researches at the present time.

THE CHOLERA IN FRANCE.

(FROM OUR SPECIAL CORRESPONDENT.)

A VISIT TO HAVRE.—PART III.

THE CHOLERA CENTRES OF HAVRE.—TYPHOID FEVER AND SUBSOIL DRAINAGE.—SEWERS AS A CAUSE OF DISEASE.—CHOLERA AND TYPHOID MAPS.

AT the foot of the hills and cliffs, which are about 300 feet high and face the sea to the west and then run inland in an easterly direction, a low-lying stretch of flat ground has been formed, and here is built the town of Havre, on soil redeemed from the mouth of the Seine. The town stands at the point of the angle formed by the sea to the west and the Seine to the south. The upper crust of the elevated ground is composed of a thin stratum of yellow clay resting on red clays mixed with silicious pebbles. This disposition of the soil varies in depth from thirty to eighty feet, and below there is a calcareous and clayey mixture. There are no impediments to the natural drainage of the soil, which is easily effected. The lower levels are more mixed in character in consequence of landslips, and here there are springs of water. The plain on which the town of Havre is built consists of banks of pebbles brought by the northerly currents of the Channel and deposited under the shelter of the cliff of St. Adresse. Here the pebbles were mixed with clay and earth brought down by the river Seine. Vegetation soon appeared, being watered by the springs that descended from the higher levels. This ground is therefore of very recent formation, is almost on the same level as the sea, and it is only necessary to dig for some four to six feet to find water. Indeed, when the sea walls were built the most important portion of the town developed itself on ground that is below the level of the high spring tides. Roughly speaking, if a straight line were drawn from the railway station, passing behind the Hôtel de Ville on to the sea beach, the whole of the crowded district to the south will be found to be below the level of the spring tides.

North of the harbour—the Avant Port, or Tidal Port—there are three districts, all three triangular in form, to which I would draw special attention (1, 2, 3 in Map II). The first, to the east, is called the Quartier St. François. It is a sort of island, surrounded on its three sides by the docks, or "Bassins de la Barre, du Commerce et du Roi." About a third of the length of the streets in this district have sewers which fall into the port. The second and middle triangular district is named after the church of Notre Dame. It forms an acute triangle, with the port for its narrow base; the Rue de Paris and the Bassin du Roi constitute the other two sides. For the third district the point of the triangle commences at the entrance of the harbour; there is the Rue de Paris on one side, the new and handsome Boulevard François Premier on the other side, and we may take the Rue de la Maillerie as the base of the triangle. This is the Quartier St. Joseph. There are but few sewers in these quarters, the streets are very narrow, the houses high, the population dense and poor, and it was in these three districts that the cholera found the greatest number of victims. The other cholera centres were to the north-east of the town, where is situated the suburb of Granville, and the south-east of the town in the Eure district (4 and 5 in Map II.). These are the five centres of the cholera epidemic.

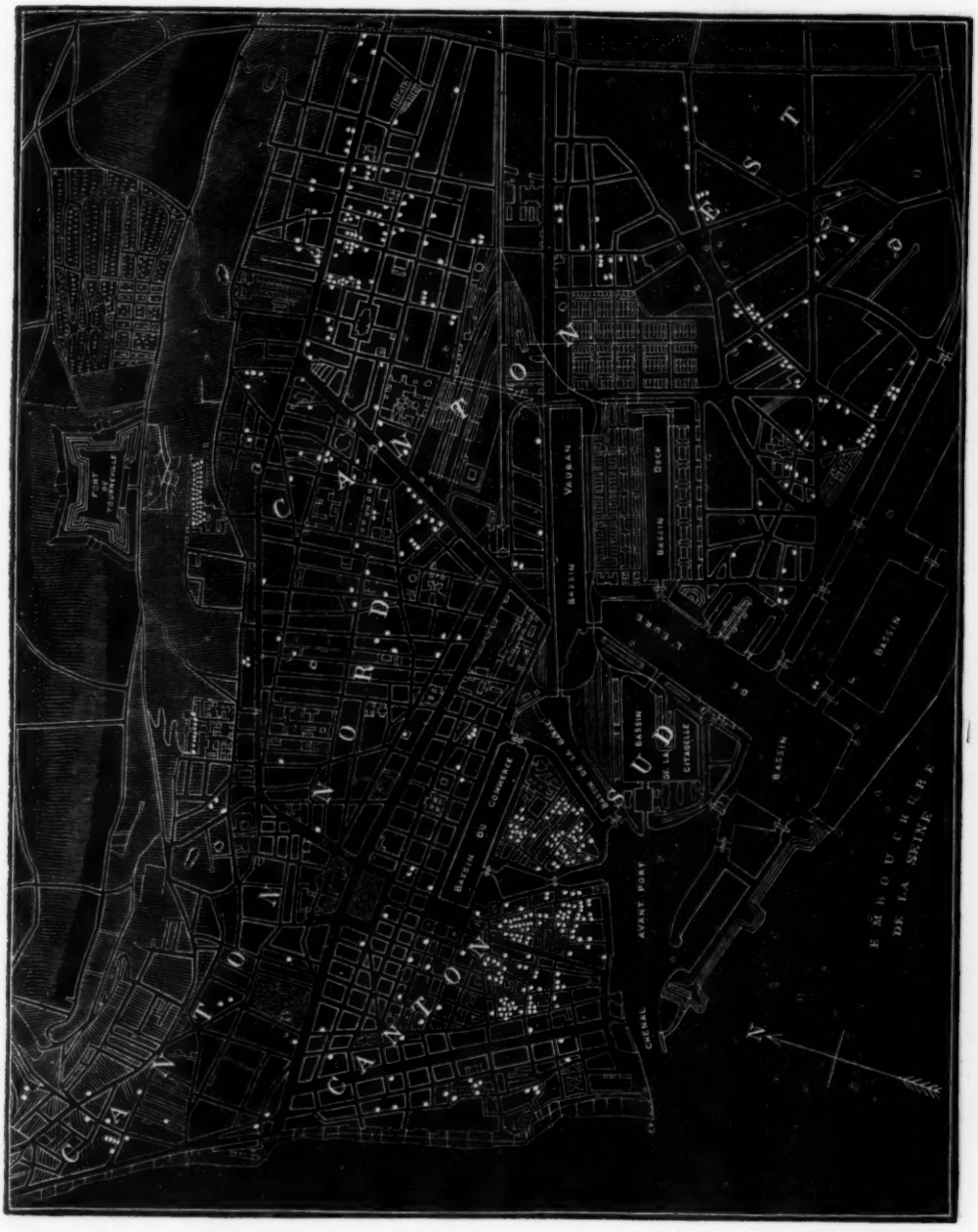
Bearing these facts in mind, let us now examine the drainage of Havre. About this a great deal has been said, but little or nothing has been done. It was in 1884-85, during the last cholera epidemic, that the matter was most seriously discussed, and no fewer than five schemes, fully elaborated, were submitted to the municipality. It was then ascertained that the streets measured ninety-eight kilometres and the sewers only twenty-six kilometres in length. Thus, the streets of Havre for more than two-thirds of their extent were without sewers. The town engineer assures me that this condition of affairs has not been altered. There may be one or two kilometres more of sewers than there were eight years ago, but there is also an increase in the number and length of the streets. Nothing whatsoever has been done. Worse than this, the most expensive and the largest of the sewers that had been built did more harm than good. A large main sewer, which has a fall of only 0·001 per metre, was constructed along the Boulevard de Strasbourg: a splendid thoroughfare running across the town from the sea inland—that is to say, running parallel with the hills, not with, but across, the incline. This sewer, placed athwart the natural drainage of the subsoil, checked the flow of the underground water currents. The result was marked and almost instantaneous. The district north of the Boulevard de Strasbourg consists for the most part of villas and houses inhabited by persons in easy circumstances, and was a remarkably healthy quarter. Typhoid fever especially, though widely prevalent in the lower parts of the town, was unknown in this most favoured neighbourhood. After the building of the sewer, to the consternation of the inhabitants, a number of cases of typhoid fever occurred north of the Boulevard de Strasbourg. No one, however, suspected the sewer; on the contrary, the cry arose for more sewers. Then a second main sewer was built further north, along the Rue Frédéric Bellanger, the Rue d'Etretat, Rue Fouache and the Rue St. Thiébault. This sewer, again, cut right across the line of natural drainage. The fall is from north to south; both these main drains run from east to west. Once more the same phenomenon produced itself; the district on the higher levels beyond this second main sewer in its turn became infected with typhoid fever—a disease which previously had been unknown to the inhabitants. Cases occurred in the mansions of the wealthiest inhabitants of Havre, built on the beautiful slope that rises up towards St. Adresse. M. Siegfried, the representative of Havre in the French Parliament, and for some time Mayor of Havre, was one of the victims. When at the last extremity his life was, however, saved by the transfusion of blood, an operation performed by Dr. Gibert. These sewers are shown in Maps II. and III., and it will be seen how numerous are the cesspits and the cases of typhoid fever north of these sewers, in districts where the fever was formerly unknown.

To fully understand the mischief that was done by building large sewers which in practice became walls serving as a dam to check the natural flow of the underground water-courses it must be explained that there are at Havre some 600 *bétoires*. The word *bétoire* is a provincial corruption of the French words *boit tout*. A *bétoire* is a sort of well or pit which "drinks all" that is thrown in. It is a cesspit with walls made as porous as possible, so that all the liquids thrown in immediately percolate the subsoil. In these leaking pits are drained all the slop and kitchen water. In the central and southern parts of the town the slop water drains into the gutters and the sewers; but in the higher and northern sections of the town—the very districts situated beyond the main sewers described—most of the houses have *bétoires*. Formerly the water that leaked out of these pits drained away into the lower town, and thence into the port and the sea. Now, this natural flow was stopped by the walls of the main sewers, and the quarters affected were soon invaded by typhoid fever.

Thus, districts which were exceptionally healthy have become less healthy, and districts formerly totally exempt from typhoid fever became susceptible to this disease when the walls of the new sewers checked the natural flow of the subsoil water. Though in these districts the subsoil was constantly contaminated by the *bétoires*, the fact that the ground was elevated and that there was a good fall ensured the prompt removal of this nuisance. On the other hand, south of the Boulevard de Strasbourg the ground is flat, there is no natural drainage for the subsoil, and there typhoid is endemic, diphtheria has prevailed extensively and the cholera has wrought havoc. Yet there are no *bétoires* south of the Boulevard de Strasbourg, except at Le Perrey, a particularly healthy district west of the Boulevard François Premier. *Bétoires*, however, are not necessary to the contamination of the subsoil. We have seen that but few streets have sewers. The slop water of the houses does not even drain into the gutters, but goes first into the back yards, and thence flows to the street gutter, but before reaching the street gutter a good deal of the water has sunk into the soil of the yards, and more sinks into the soil of the street, for the gutter may travel a long distance before it reaches the gutter of some other street where there may be a sewer. It is only necessary to visit these quarters to see the enormous quantity of liquid filth which form stagnant puddles and pools in the yards, passages, courts, alleys, and streets. In the poorer and dirtier quarters this slop water often contains fæcal matter. The inhabitants employ vases instead of frequenting the closets, and empty these vases where only slop water should be thrown. The closets are generally so extremely filthy that it is not surprising if many persons seek to avoid them. In

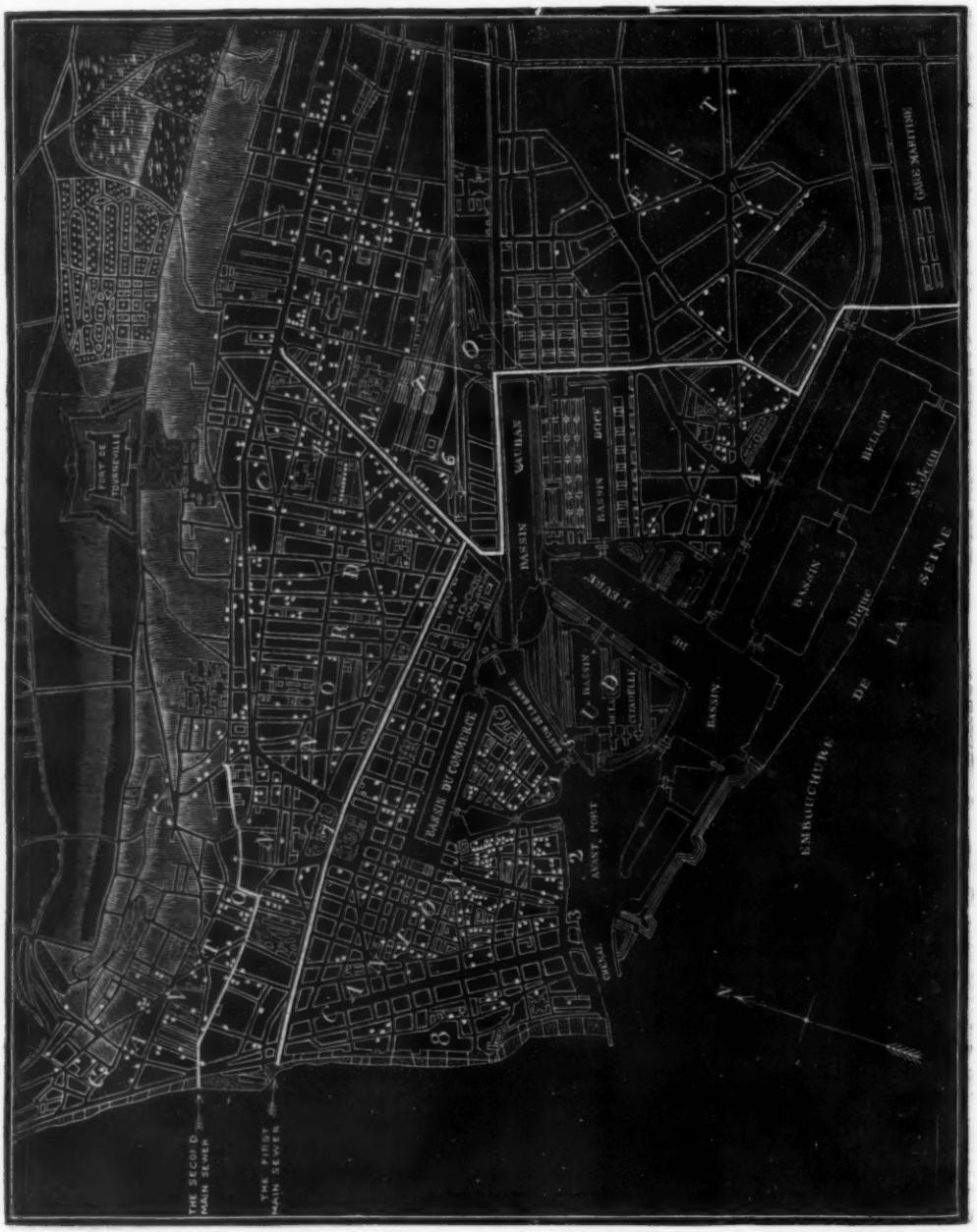
MAP I. — CHOLERA

Topographical Map showing the position of the houses inhabited by persons who died from Cholera from the 15th of July to the 13th of October, 1892.



MAP II.—TYPHOID FEVER.

Topographical Map, showing the position of the houses inhabited by persons who died from Typhoid Fever from the 1st of January, 1887, to the 31st of December, 1888. There were 409 deaths in 1887 and 288 in 1888, and also 24 deaths at the hospital of persons who gave no address



1. The Quartier St. François
2. The Quartier Notre Dame
3. The Quartier St. Joseph
4. The Eure District.
5. The Granville District
6. The Railway Station.
7. The Hôtel de Ville
8. The Perrey District.

MAP III. — CESSPITS.

MAP OF THE BÉTOIRES, OR LEAKING CESSPITS OF HAVRE,

Showing that these leaking cesspits are situated for the most part on the higher ground to the north of the two main sewers. The cesspits will also be noted in the Eure District to the South-East and in the narrow Perrey District to the West, with its long sea front and tidal flushing of the subsoil.

all the poorer houses I have visited there were pail closets, with no ashes; nothing whatsoever to mitigate the nuisance. In other houses there are cesspools as in Paris and many large French towns, but some of the houses drain direct into the sewers.

At the Bureau d'Hygiène every case of cholera was marked on a large ordnance map by a pin. At my request and for the special benefit of the readers of THE LANCET a black spot was painted on the place inhabited by each person who had died from cholera. The map thus marked was photographed, and is now reproduced on p. 1125. In looking at this map no notice need be taken of the rows of spots to the north where the hospital stands. The deaths that took place at the hospital are recorded at the houses whence the patients were removed. The cholera map shows, at a glance that the three triangular districts I have described have suffered the most. It also shows that the district to the east of the Hôtel de Ville, a central district, has been almost entirely exempt from cholera. (The Hôtel de Ville is marked 7 in Map II.) Here the streets are wide, they are better drained, and the Bouvelard de Strasbourg slants in a somewhat more southerly direction, so that the main sewer built under this boulevard is not quite at right angles with the line of flow of the natural subsoil drainage. What is also very remarkable is the comparative immunity from cholera in the narrow and long Perrey district west of the Boulevard François Premier (marked 8 in Map II.). Nothing can be more wretched than this neighbourhood. The people who live here are just as poor as those who live in the poorest streets of the St. François or Notre Dame districts. Their houses are as badly built and have the extra defect of possessing numerous *bétoires*? All that can be said is that the houses are not so high or so crowded together. The death-rate here is nevertheless much below the average of the town. Few cases of diphtheria and of typhoid fever have occurred, and the cases of cholera are scarce when compared with what has happened in other places peopled by the same class of persons. Dr. Gibert has prepared a map on which he has marked the deaths during the great typhoid fever epidemic of 1887 and 1888 (see Map II.). There were then 697 deaths from typhoid fever. It will be seen that during the typhoid fever epidemic, as also during the cholera epidemic, this district of the Perrey was equally exempt. Dr. Gibert conjectures that such immunity is due to the fact that the subsoil at Perrey is flushed out twice a day by the tide. This narrow strip of ground protrudes into the sea, receiving the full force of the currents. On the other hand, if we take the three triangular districts to the north of the port, it is easy to see that they are not washed by any subterranean current. There is a tide in the port, but this is carefully walled round by quays.

If we compare the map of the typhoid fever epidemic with that of the cholera epidemic, we shall be at once struck with the similitude of both maps. They are so much alike that it is very difficult to distinguish the one from the other. Dr. Gibert has drawn other maps for other diseases, notably for diphtheria and for phthisis, and he finds that they also bear a startling likeness to the typhoid fever and cholera maps. It is the same streets and the same districts that suffer most from these very different diseases. What is the cause of this remarkable phenomena? In the poor, dirty, badly built district of Perrey the St. Laurent water is drunk, and there is little or no cholera or typhoid fever. In the St. Joseph, the St. François and the Notre Dame districts, where very poor people dwell, the St. Laurent water is used, and there is an appalling prevalence of typhoid fever and of cholera. At the barracks, where 1200 soldiers are garrisoned, and at the prison, with a population of 550 persons, the St. Laurent water is consumed and there is not a single case of cholera. At the huge block of buildings where 600 custom house officers live, and with their families constitute a population of about 3000 persons, the St. Laurent water is taken, and there have been but two doubtful cases of cholera. These buildings are near the better drained central district to the east of the Hôtel de Ville, where the St. Laurent water is drunk, and where the cholera and typhoid fever have done little or no harm. In almost all parts of the town the same water is consumed, yet the prevalence of cholera is very unevenly distributed. Nor does the cholera always spread in very poor, wretched old houses, otherwise the Perrey district would not have escaped. Two causes seem to exist which apply to the districts especially affected and not to the other parts of the town. The first is the want of proper subsoil drainage—in other words, a long-standing contamination of the subsoil unrelieved by natural drainage. This cause may be taken to apply to the five chief cholera districts, the three triangular districts, the Granville district, to the north-east, where the cholera began, and to the Eure district in the south, where there are a great many *bétoires*. The second possible cause applies more particularly to the first three districts than to those of the Granville and Eure—it is the want of air in the streets; in other words, the height of the houses and the narrowness of the courts and streets. In this respect, if we look at the houses on the Grand Quai facing the harbour and the Boulevard de Strasbourg we find no deaths from cholera, or at least only one death on the Boulevard de Strasbourg. The death marked on the Grand Quai occurred in a back yard. In the broad Rue de Paris, the busiest street of the town, there was but one death. Where the streets are broad and well swept by the sea air there are few or no deaths from cholera. This is especially remarkable with regard to the Grand Quai and the Rue de Paris, the worst streets being behind the Grand Quai and by the side of the Rue de Paris. It would seem from this that there is relatively little danger in living in close proximity to cholera districts if the house inhabited has a plentiful supply of air and an open space in front. Even without these essentials to health the better drainage of the subsoil might produce the most beneficent results. Dr. Gibert especially insists on the fact that when a pure water-supply was brought to Frankfort typhoid fever still continued. It was only much later and after the town had been thoroughly drained that typhoid fever ceased. Perhaps, if Havre were properly drained and the contamination of the subsoil prevented, typhoid fever would disappear and cholera would not again be able to break out in an epidemic form.

Undoubtedly a complete system of drainage is an imperative necessity. The death-rate of Havre is the sure evidence of the bad sanitation of the town. The death-rate for the ten years 1880–89 was 30·9 per 1000 of the population; the birth-rate during the same period was 32·8 per 1000 of the population. In the northern (Canton Nord in maps), or wealthiest division of Havre, the birth-rate was 27·6 and the death-rate 27·9 per 1000. In the southern (Canton Sud in maps) district the birth-rate was 31·6 and the death-rate 32·1. In the eastern (Canton Est in maps) district the birth-rate was 39·8 and the death-rate 33·2. Thus, where there was the greatest poverty and the highest death-rate, the population increased the most, while in the healthiest and most wealthy division of the town the birth-rate was a little below the death-rate. In the northern division live the merchant princes; in the southern division labourers and sailors; in the eastern division artisans, workmen and Brittany navvies. But the most striking contrast will be found if death-rates of various streets are compared. For instance, the death-rate in the Rue François Premier is only 12·03 per 1000, whereas, not far off, in the Rue Marbonne, the death-rate reaches the alarming proportion of 57·2 per 1000. When such variation occurs, we may be sure that proper sanitary measures would, in a great measure, remedy the evil. In any case, it is now clear that the interference with the subsoil drainage has done great harm, and that where the underground waters stagnate there disease is most prevalent and there the cholera found its home and its readiest victims.

THE ETHICS OF OPIUM.

Deputation to Lord Kimberley.

ON Thursday afternoon, at the India Office, a large deputation, representing the Society for the Suppression of the Opium Trade, the Women's Anti-Opium League, the Baptist Missionary Society and a number of other organisations, waited upon Lord Kimberley, the new Secretary of State for India.

Sir JOSEPH PEASE, M.P., introduced the deputation and in the course of his remarks spoke of the Indian Government being engaged in an immoral trade which ought to be put down speedily and with vigour.

Mr. J. G. ALEXANDER, Secretary of the Society for the Suppression of the Opium Trade, presented a memorial to his lordship which had been prepared on behalf of the Society. This memorial asserted that the emphatic condemnation of the opium trade pronounced by the Members of the late House of Commons was the result of a widespread feeling amongst the most thoughtful people of this country, and especially

amongst the Christian churches hostile to the continuance of the opium trade at present carried on by the Indian Government. The public conscience was shocked, not merely by the sad and shameful record of the wars by which the legalisation of this traffic was wrung from China, but by the continuing fact that the British nation raised revenue wherewith to provide for the cost of governing India by trading in an article which was prepared for vicious use, which brought misery to countless myriads in China and other Eastern lands, and the sale of which in this country was subject to restrictions based on its recognition by the entire medical profession as a dangerous poison. The Society had good reason to believe that the recently elected House of Commons contained at least as large a majority of members opposed to the continuance of the opium trade as the last, and that there was not the slightest possibility of the vote of two years ago being reversed. As to the Bengal opium monopoly, the Society would urge upon his lordship that the Indian Government should be instructed still further to reduce the area of poppy cultivation for the coming season, so as to limit the production of opium to that which medical use required, and at once stop the Government opium sales at Calcutta. As regards Malwa opium, the Society submitted that the same moral grounds which could alone justify the existing prohibition of poppy culture in by far the greater portion of British India required that Her Majesty's Government should prohibit the transit of opium from the Central States through British territory to the sea, except in the case of opium prepared for medical use. With reference to the Excise system, the Society simply asked that principles which had long been recognised in the legislation of the United Kingdom be applied for the protection of our fellow subjects in India. They would urge upon his lordship to request the Indian Government without delay to prepare and adopt such regulations under the Indian Opium and Excise Acts as might be found best suited to adapt to the requirements of British India the fundamental principles that the sale of poisonous drugs was to be restricted to medical and scientific use and that discretionary powers for such sale should be entrusted only to responsible and carefully selected persons who possessed, adequate knowledge of the deleterious properties of these drugs who could readily be called to account for any improper use of the discretion conferred upon them, and whose remuneration in no degree depended on the amount of their sales. In conclusion, the Society asked that the Punjab system of licensing the cultivation of the poppy should be put an end to at once.

Dr. Swanson, representing China missions, Mr. Thomas Hanbury, who described himself as on old China merchant, Mr. David M'Laren of Edinburgh, the Rev. George Pearcy, representing the Wesleyan Conference, and several other members of the deputation, addressed his lordship.

Lord KIMBERLEY, in reply, thanked the deputation for the expression of their views. It was, he said, very generally agreed that opium consumption was to a certain extent an evil. That was not denied even by those who did not share the views of the deputation. The Government of India had recognised that it was their duty to restrict and regulate the consumption of opium in a manner which they certainly would not restrict and regulate the consumption of a perfectly harmless drug. Starting from that proposition, a practical question had to be dealt with. As regards the importation into China, the declaration of Sir James Fergusson was conclusive upon one point, and that was the absence of any compulsion on our part on the Chinese Government to receive opium. The Chinese Government had made a treaty under which they were allowed, very properly, to raise the duty upon opium. He had no reason to doubt that they were still of the same mind as then, and that they were extremely glad of the revenue derived from the opium. It was universally agreed that there was a very large and increasing growth of opium in China itself, and he was told, too, that there was a great improvement in the preparation of the drug in that country. His information was to the effect that now the Chinese drug was much more acceptable than in former days to those who used it. As to the action of Her Majesty's Government, he could not do better than refer to some words on this subject used recently by Mr. Gladstone. In the course of a speech, with which doubtless they were familiar, Mr. Gladstone said he was prepared, subject to the obligations of good faith, to forward any measure within the bounds of reason for limiting the Government connexion with the opium revenue and bringing that connexion, if possible, to an end. That was a proposition which would be to a great extent agreed on by the deputation. As to the practical question which came before them, they need have no doubt as to the reception the Treasury would give to any proposal for increasing the burden upon the ratepayers of this country. The reception would be far from favourable. In calculating the loss to India they must look not only at the loss to the Government, but also to the value of the opium as exported. He could not make himself responsible for the figures, but he was told that the value of the opium might be taken at no less than thirteen millions sterling. The loss of revenue had been estimated at £3,850,000. He did not think they could rely on that estimate for the future; because he believed recent years had been exceedingly unfavourable to the production and sale of opium, and there might be a considerable increase in the future. At the same time it was quite clear that there was a tendency on the part of the opium revenue to decline. He did not regret it because it rendered the problem before them less difficult. With regard to the actual exportation, he was bound to say, as the Minister responsible for Indian affairs in this country, that the Government did not see their way—at all events, at the present time—to dispense with this large revenue. The financial position of the Indian Government at the present time was one of difficulty. As to the internal consumption, the deputation must keep in mind that he had to take into consideration all the different opinions on this subject. He thought it right to say that the strong feelings which the deputation held with regard to the extreme injury done by the consumption of opium to the people of India were not shared by a very large number of persons. Many people wholly controverted the statements constantly made that opium was a simple poison, and that no one could consume it without injury, except for medicinal purposes. On the contrary, there were those, whose opinion deserved consideration, who said that opium might be consumed by portions of the Indian people not only without injury, but with considerable benefit. The Government were at a loss how to decide the matter. He considered that opium undoubtedly did a considerable amount of mischief. How far it ought to be restricted and how far it ought to be entirely abolished were the questions before them. The Government had already taken some measures in the way of restriction, and might, as time went on, be able to do more in that direction. He hoped the deputation and those who shared their views would not dismiss lightly what the Government of India had done. He wished to separate Burmah from India in considering this question. In Upper Burmah the consumption of opium, except by the Chinese, had been prohibited, and it was extremely natural that the deputation should look to a similar prohibition being extended to Lower Burmah. The question resolved itself into one of machinery. The Government of India saw very serious practical difficulties in the way of extending the prohibition to Lower Burmah, but they had the matter under their consideration at the present time, and he was quite sure they would take any measures which they thought practicable.

A member of the deputation expressed the opinion that the exception in the case of the Chinese spoilt the effect of the prohibition in Upper Burmah.

Lord KIMBERLEY said he did not agree with that view. He could not hold out any hope that the Chinese would be deprived of their opium. It would be quite sufficient, in the first instance, to deal with the Burmese people. The position of the Government was this. They were sensible of the advisability of as much as possible restricting the consumption of opium; they had taken measures in that direction and they were quite prepared to consider further measures. Some member of the deputation had spoken of the admirable results likely to follow our showing the example of stopping the sale of a drug so deleterious as opium. He did not think the example would be very powerful if people looked to the state of things in this country. He was not himself what would be called a temperance reformer, but he was sensible of the enormous mischief done by the over-consumption of alcohol, and he would ask the deputation to consider whether we could present any very brilliant example to the Indian people while we derived a very large part of our home revenue from the consumption of alcohol, which he should think did a greater amount of harm than the consumption of opium. The views put forward by the deputation would be carefully considered, and for his part he should be extremely glad if the Government could devise means of bringing the consumption of opium within narrow limits. He should like to add one word. He desired

to impress upon the deputation that there were other drugs than opium in India, and that if opium were entirely prohibited there would be a very largely increased consumption of these drugs, which were infinitely more deleterious.

The deputation thanked Lord Kimberley for receiving them and retired.

THE BRAIN OF THE LATE MR. GEORGE GROTE, F.R.S.

I

IN the recent number of the *Journal of Anatomy and Physiology* there is a most interesting article by the late Professor John Marshall on the brain of Mr. Grote, the eminent historian and banker, one of the founders of University College and for many years the Vice-Chancellor of the University of London. Mr. Grote died in June, 1871, of renal disease, probably of some six months' duration. His weight had fluctuated between 161 and 164 lb., his height was 5 ft. 11¼ in., and he was neither very stout nor very thin. His family history was somewhat peculiar, for his paternal grandfather was a pure German who had married an Englishwoman, whilst his maternal grandfather was an Englishman who had married a French lady, but whose ancestry, however, was also partially English; so that Mr. Grote's descent was more than one-half English, one-fourth German, and less than one-fourth French. Eight years before his death this remarkable man expressed a wish in writing that his brain should be carefully weighed and examined by a skilled anatomist and any peculiarities noted, especially as to whether the cerebellum was deficient as compared with the cerebrum. The late Professor Marshall duly examined Mr. Grote's cranium and brain and his report thereon is now published. It contains not only a mine of information on the details special to Mr. Grote, but it is especially valuable for its comments and observations on the general structure of the brain and its relations to some vexed questions in cerebral physiology which are introduced into the report. In the present article, however, we must limit ourselves to the general characters and special details of Mr. Grote's brain and skull, omitting for the present some of the wider generalisations which are raised in the report. The brain, on its removal from the skull, with its covering of arachnoid and pia mater, weighed 49¾ oz. avoirdupois, which is three-quarters of an ounce heavier than the average weight of the European adult brain—if we take Welcker's standard of 49 oz.—and 1½ oz. heavier than the average English adult brain of 48¼ oz., as calculated by Dr. Robert Boyd from 110 observations. But Dr. Boyd's tables show conclusively that whilst the maximum weight of the brain is usually attained between thirty and forty years of age, it decreases at first slowly, then more rapidly, as age progresses, so that between seventy and eighty years of age its average weight is only 45½ oz. This would show that Mr. Grote's brain was about 3 oz. above the average weight at the age at which he died. The circumference of his hat on the inside was 23¾ in., and that is 1¼ in. above the average of English gentlemen. But *pace* Mr. Galton, owing to individual peculiarities in the shape of the skull, the amount of hair, and the mode in which the hat is worn there may be a very wide divergence between the size of the hat and the cranium. In Mr. Grote's case this difference was 1½ in. The weight of the brain to that of the body is probably very variable, but it is generally calculated at about an average ratio of 1 in 36 to 40, but in this instance it was as low as 1 in 50, and to explain this wide difference it is suggested that it was due to the effects of the renal disease from which he died. His brain and skull showed distinct marks of atrophic changes, but those due to age cannot be separated from those due to disease. Moreover, we possess no data showing how the weight of the brain is influenced by various forms of disease, nor, as Professor Marshall points out, do we know how it is affected by stature, for Parchappe's opinion that tall persons have not only absolutely but relatively larger brains than short ones is more than doubtful. The brain weight of fifteen eminent men collected by Dr. Thurnam, when corrected for age, varies from 66 oz. in Cuvier's case to 45½ oz. in Haussman's, and Grote's position would be between the tenth and eleventh on that list. But that list comprises men of eminence from different countries, and we have another comparison which is far more interesting. The absolute weight of the brain of Thackeray was 58½ oz., of De Morgan 52¾ oz., of Grote 49¾ oz., of Babbage 49½ oz., and of Professor Grant 45½ oz. When corrected for age Grote comes below Babbage and is the fourth in this series of well-known Englishmen who have recently died. Like the brains of Dupuytren and Whewell, to which it closely approximates in weight, it cannot be said to be a very large brain. Compared with Cuvier, Abercrombie and Thackeray Grote's brain seems small, but Cuvier's brain was probably abnormal, and Abercrombie's (63 oz.) surpassed the maximum weight of 60¾ oz., recorded in Dr. Boyd's tables, which give the weight of 700 adult sane male brains. The relation of the weight of the cerebrum to the cerebellum was investigated after the brain had been partly hardened in spirit and its membranes removed. In this state it weighed 39 oz.; the cerebrum being 34¼, the cerebellum 4, the pons varolii with the medulla oblongata ¾ oz. This gives a ratio of 8·5 to 1 in Mr. Grote's case, which is about the average proportion of 8 to 1. But here considerations of height must be regarded, if we would be safe against an evident source of fallacy. From some interesting calculations on sixty-seven persons, between 5 feet 10 inches and 6 feet, thus including stature as well as age, Professor Marshall concluded that the average proportion of cerebrum to cerebellum was 7·6 to 1 at this height, whilst in Mr. Grote's case it was 8·5 to 1. No doubt it would have been very satisfactory to Mr. Grote, as it will be to his numerous friends, to have learned with scientific accuracy that in his case in proportion to the cerebrum the cerebellum was deficient; although this relative deficiency was due to an absolute increase of the cerebrum, rather than to any important diminution in the cerebellum. The consideration of the bearing of other important questions suggested by the shape of his cranium and of the cerebrum, the asymmetry of certain lobes, their relative weight, and the proportions between the grey and white matter, must be deferred to another occasion.

FATALITIES UNDER ANÆSTHETICS.

WE have received the following notes of a death under chloroform at University College Hospital from Dr. Dudley Buxton, the anæsthetist and instructor in anæsthetics to the school.

J. G——, a master builder, aged fifty-nine, came up from Wales to be treated for epithelioma of the jaw, involving the inside of the cheek. He was admitted under the care of Mr. Christopher Heath, who decided to remove the jaw and the tissues involved in the growth. The patient was duly prepared for the operation, and came into the room adjoining the theatre used for anæsthetising patients. He was examined and found to be free from organic disease, except the malignant growth referred to above. Chloroform was administered from folded lint which was kept a little distance from the face, the patient being supine upon a high couch table. No unusual symptoms occurred, there was a short stage of excitement, and in about five minutes the respiration was regular and even and the conjunctival reflex abolished. At this stage the couch was wheeled by dressers into the theatre, the chloroformist giving his entire attention to the patient, who appeared to be in every way in a satisfactory condition. He was then transferred to the operating table, being lifted by the four corners of sacking on which he lay from the couch table on to the operating table. The chloroformist then noticed the respiration grow shallow and at once requested Mr. Heath to pull forward the tongue. The chloroform was removed and not again reapplied and artificial respiration carefully and thoroughly carried out. In compressing the chest from below after Howard's method it was noted that the heart's action was persistent. It was observed that although the head was fully extended and the tongue was drawn out of the mouth some stridor existed as though the air passage was mechanically obstructed. Laryngotomy was performed to ensure free air entry, but a vein being unfortunately wounded gave rise to considerable venous hæmorrhage. This was probably increased by the elevation of the trunk. A Hahn's tube was inserted into the laryngotomy wound in place of the ordinary tube and the clots and blood cleared from the

mouth, and the body of the patient was placed horizontal. The tube was sucked and some blood removed by this means. The hæmorrhage was restrained by this contrivance, and oxygen was administered through the tracheal opening. Throughout these measures artificial respiration was steadily kept up, and, so far as possible, care was taken to assist the occasional sighing breaths which the patient gave. The man never resumed regular respiration, and the heart stopped within a short time of the failure of respiration. A necropsy made on the following day showed a fairly healthy heart considering the patient's age. The myocardium was firm, the aortic valves showed some thickening and the arteries were healthy. The lungs showed old pleuritic adhesions and an old cicatrix in the right apex. The bronchi contained some fluid blood, and were stained; there were no clots and certainly not enough blood to have caused much obstruction. The other viscera and nervous system were to the naked eye free from disease.

Remarks by Dr. DUDLEY BUXTON.—This sad case is one remarkable rather for the negative than for the positive evidence it offers whereby to arrive at the cause of death. The chloroform was from the same bottle which had been used immediately before, without let or hindrance, for two similar cases. It was given by probably the safest plan, that used by Syme and Simpson, and the respiration was watched with the utmost vigilance from start to finish. Indeed, as the respiration and colour of the patient had been so satisfactory, no regard was had to the pulse until trouble came on, when an onlooker was requested to test it. There appeared no psychic fear or dread either of the anæsthetic or of the operation; the man quietly submitted; there was no struggling, imposing undue strain on the circulatory system. The lint was kept wet with chloroform throughout and no fresh supply had been added before the dangerous symptoms arose. There was no apparent impediment, no gasping breathing, as might have led to the intake of an overdose; indeed the quiet failure of inspiration was what might be regarded as "protective" if this view of the matter be taken. The danger of forcing on chloroform into the blood was borne in mind, and until it became evident that there would be no self-elimination efforts were made rather to assist than to compel respiration. A plain statement of the above facts will probably prove more useful than spinning conjectures as to the *modus operandi* of death. It will be noted that as the above case was one in which syncope did not take place the remedies appropriate for that condition were not employed.

ADULTERATION AND THE WORK OF THE INLAND REVENUE.

THE report by the principal of the laboratory of Somerset House, which is embodied in the thirty-fifth report of Her Majesty's Commissioners of Inland Revenue for the year ending March 31st, has recently been issued. The total number of samples analysed for the Government during the year has amounted to 43,566, which is 130 more than in the previous year, while under the twenty-second section of the Sale of Food and Drugs Act only forty-five samples have been referred by the magistrates to the Somerset House chemists for analysis. The referred samples comprised butter, buttermilk, coffee, dandelion coffee, lard, linseed meal, milk, mustard, whisky, white pepper and rum. As is nearly always the case, the larger proportion of the samples consisted of milk. Of these, four were alleged to have been diluted with water and deprived of part of their fat, but only in one of the cases, however, could the referees support the charge, and that only in respect of abstraction of fat. In the case of twenty-five other samples they concurred in the conclusions of the local analyst in respect to twenty-one of them. The remaining four afforded no evidence of dilution, but the milk in each instance had undoubtedly been deprived of part of its fat, although this offence had not been charged.

It is noteworthy that the Somerset House authorities confirmed the analyses of the local analyst in twenty-one out of twenty-five cases of milk in which the charge was dilution with water. Doubtless the results of analysis of the four samples to which exception was taken were the same, but probably the interpretation of these results led to a different conclusion respecting the quality of the milk. In order to determine whether a milk is pure or not it is obviously necessary to adopt a standard of quality from which all other samples may be judged. Unless this standard is agreed upon once for all, differences of opinion as to whether a milk has been diluted or not are bound to exist. But the difficulty lies in fixing a standard of quality for an article which, like milk, varies so widely in composition. If a high limit is adopted then, no doubt, in a few solitary instances milk vendors would be dealt with unfairly. If, on the contrary, the limit adopted be low, then probably the majority of milk dealers would be enabled to water to a certain extent the milk of average yield. According to a large number of analyses published in 1883 by the principal of the laboratory at Somerset House, Dr. Bell, the non-fatty solids of milk from individual cows vary from 8·0 to 11·27 per cent., and the fat from 1·92 to 6·87 per cent.; while in the case of dairy samples the non-fatty solids vary from 8·5 to 9·91 per cent. and the fat from 2·90 to 5·1 per cent. Occasionally a milk falls below even 8·5 per cent. in non-fatty matters and 1·9 in fat, which must still be regarded as genuine, the samples having been drawn in the presence of a responsible person. There is reason to believe, however, that when a standard as low as 8·5 is taken the milk vendor is treated very leniently—in the majority of instances probably too leniently; and it is useless for the public to expect to be provided with—inasmuch as the Act does not encourage the supply of—milk of really excellent and irreproachable quality. The same holds true in regard to fat. If the limit of genuine milk is to be 2 per cent., then obviously the dealer may with impunity skim down a milk containing 5 per cent. to the extent of 3 per cent. As things stand, in fact, the Act does not sufficiently protect the public, who according to its present reading may be provided with milk that is "genuine" compared with the low standard, but to which it is pretty certain water has been added, and from which cream has been abstracted. The report referred to, however, gives some hope of this matter being placed upon a more satisfactory basis. Dr. Bell has considered it desirable, inasmuch as the quality of milk is materially affected by the breed of cows and by the food they receive, to make a fresh investigation into the character of the milk now generally produced in order to ascertain whether any material changes have taken place, after an interval of ten years, in its composition which would affect the standards of quality hitherto relied on as a guide in dealing with samples suspected to have been tampered with. This investigation will be continued during the present year, so far as may be consistent with the current work of the department. That the Somerset House authorities have hitherto adopted a low limit, both as regards milk and butter, is quite obvious from a consideration of the cases appearing at the police-courts from time to time. The local analyst reports adulteration—it may be to a slight extent only—and the referees—although they should, of course, obtain the same analytical figures, everything else being the same—are, in many instances, unable to affirm that the sample is sophisticated. This frequently happens, and the competency of the local analyst is not unnaturally brought into question; but it must be admitted that in the case of milk the analysis of the local analyst is more likely to indicate correctly its character than is the analysis of the Somerset House authorities. The local analyst examines the milk before any important change in its composition has taken place, whereas the referees unavoidably examine the sample when it is several days old, and consequently when it has undergone considerable decomposition. With regard to the standard quality of milk there really seems no reason why it shou'd not be subjected to the same regulation as spirits—i.e., never to be allowed to contain more than a certain and reasonable proportion of water. It should, so to speak, be kept up to strength. It must be remembered that milk is not only an essential article of diet, but is also one used largely for infants and invalids, to whom the abstraction of food elements is a serious matter. Apart from this, the quality of the water used by the dishonest tradesman to dilute the milk may not be above suspicion. It is for the owner to see that the cow is not ill fed, while if it is in an unhealthy condition the milk from it should not be sold at all. The rich milk of some cows could be mixed with the poor milk of others and so an average product obtained which would come well within the limits of a milk of really good quality.

Amongst the investigations carried out by the Somerset

House laboratory officials in other departments the result of an inquiry into the value of disinfectants for the Board of Trade calls for notice. The work of the committee appointed by the Board was undertaken to fix a standard of efficiency for disinfectants intended to be used on board passenger and merchant ships, and to revise the list of disinfectants in the medical scales of the Board of Trade. It was decided to adopt as standards a solution containing 80 per cent. carbolic acid and a powder containing 20 per cent. of the acid. Every disinfectant on the Board of Trade list was examined bacteriologically, in order to determine whether it was equal in value to the standard as an antiseptic and disinfectant. The experiments extended over several months, the result being that nearly every liquid disinfectant on the list was found to be inferior to an equal bulk of the carbolic acid solution, and in the case of powders to an equal weight of the carbolic acid powder. The method adopted is not explained, and the kind of organism experimented upon is not mentioned; but it must be admitted that the conclusions come to by the committee are not in agreement with the observations of previous investigators, such as Koch, Martens, Bucholtz and others.

Further on in the report a very satisfactory account is given of the home manufacture of tobacco. It is carried on with almost absolute freedom from adulteration, and the regulations as to restriction of water have been so satisfactorily observed during the year that it has only been necessary in two cases to take proceedings against manufacturers.

The evils attending the drinking of methylated spirit and the frauds thus committed against the revenue have received due attention. Within a limited area in the north of Ireland, it will be remembered, methylated spirit was being used as a beverage by some of the rural population, so the Revenue decided, at the suggestion of Dr. Bell, that while methylated spirit for general use in the arts and manufactures should be still allowed as hitherto, that portion sold by retail to the general public should contain a small addition of petroleum. This admixture renders the methylated spirit turbid when diluted, and also more offensive in character; and from the accounts from the district principally affected the retail sales since its introduction have largely fallen off, and there is every reason to believe that the practice of using such spirit for drinking purposes has been extensively abandoned, if not altogether stamped out.

FELIXSTOWE SPA.

BY H. MACNAUGHTON JONES, M.D., F.R.C.S.I. & ED., &c.

IT may interest readers of THE LANCET to know something of Felixstowe and its medicinal spa. Not that I assume that many who have sent patients to imbibe the invigorating and delightful air of the Suffolk coast and the breezes which blow over Felixstowe, Aldeburgh and Lowestoft have not themselves enjoyed the bracing effects of the sea air of these well-known watering-places, each of which has its own special attractions for different visitors; but there are several who have not had the opportunity of visiting these Suffolk health resorts, and for whom a few notes of one of them and its natural mineral spring may be of interest. Facing the German Ocean, between Harwich on the south and Bawdsey at the mouth of the Deben river on the north, Felixstowe beach occupies an ampitheatre which has at one point of the crescent Landguard Fort, commanding the entrance to Harwich, and at the other a picturesque villa perched just above the cliffs of red crag and London clay that bound this part of the coast and over which there is a delightful walk to Felixstowe ferry. In the distance to the south can be seen the long head of Walton-on-the-Naze, and from certain vantage-points in the neighbourhood can be obtained good views of Harwich harbour and shipping and the lighthouse of the quiet little bathing town of Dovercourt. The lights of the *Cork* and the *Sunk* flash right in front of the beach some three and twelve miles off respectively, and a pleasant hour can be spent on board the former lightship after an agreeable row of some three-quarters of an hour from Felixstowe. In 1105 a priory of black monks was founded and dedicated to St. Felix; here the renowned bishop had resided, and there are many evidences that Roman, Saxon and Norman settlers successively lived here, the latter conquerors leaving in the remains of Walton Castle, distributed in pond and ancient church, clear proofs of their military resources. The temporary sojourn of the Empress of Germany at Felixstowe in 1891 brought this quiet watering-place into still greater prominence as a summer seaside resort; and the famous golf grounds and the well-known golfing club—the links of which are splendidly placed on the side of the Deben river, close to the sea, about two miles from the eastern side of the town—attract many visitors. The capital bathing beach and the safe sands render Felixstowe a typical place for children, and each year it is growing more in popular favour as a children's holiday resort. Some few years since Dr. J. E. Taylor wrote a report in connexion with a scheme for the construction of a waterworks for Felixstowe, and in the necessary examination of the well water he found that it contained many valuable mineral ingredients, and amongst these iron; and Dr. Frankland, who had specimens of the water submitted to him for report as to its suitability for domestic use, while proving that this was impossible, suggested that it might be usefully employed for medicinal purposes. As in other chalybeate springs, the iron exists in association with sulphur in the pyrites which occurs in the London clay at Felixstowe. Dr. Taylor then pointed out that there was a trace of phosphates in the water, and accounted for its presence through the coprolites or phosphatic nodules found at the base of the red crag at Felixstowe. It does not appear from Dr. Frankland's analysis (made in 1891) of the well water that he found any phosphates in it. Dr. Taylor, having tested personally and with others the medicinal properties of the spa, was induced to try its aeration by artificial means, hoping thus to get rid of the smell and unpleasant taste due to the decomposition of the pyrites which, as I have said, is found in the London clay of the soil. In this he has been most successful. The taste reminds one of the Wienbrunnen spring at Schwalbach—sparkling and mildly chalybeate. I have spoken to several people of various ages who have taken the water as a chalybeate tonic, and on whom it has had a good effect. The recent analysis (1891) of Dr. Frankland is as follows.

"One hundred thousand parts of the water yielded the following ingredients:—

	Parts.
Total solid residue dried at 130° C.	85·30
Lime as carbonate ($CaCO_3$)	11·76
Magnesia as carbonate ($MgCO_3$)	2·16
Total magnesia as carbonate (MgO)	5·78
Soda (ONa_2)	22·25
Potash (OK_2)	1·21
Chlorine	30·44
Sulphuric anhydride (SO_3)	3·40
Silica	1·51
Alumina and peroxide of iron (Al_2O_3 & Fe_2O_3)	0·11
Organic carbon	0·063
Organic nitrogen	0·019
Ammonia (NH_3)	0·070
Nitrogen as nitrates	0·0
Phosphoric acid	0·0

These constituents are probably combined in the water in the following manner:—

	Parts.
Carbonate of lime ($CaCO_3$)	21·00
Carbonate of magnesia ($MgCO_3$)	4·54
Sulphate of lime ($CaSO_4$)	4·01
Sulphate of magnesia ($MgSO_4$)	1·52
Chloride of magnesium ($MgCl_2$)	7·36
Chloride of sodium (NaCl)	39·60
Chloride of potassium (KCl)	1·92
Silicate of sodium ($SiNa_2O_3$)	3·07
Alumina and peroxide of iron (Al_2O_3 & Fe_2O_3)	0·11

The aerated spa water was pleasant to the taste and well charged with carbonic acid."

The constitution of such a water would justify the belief that it must prove of use in cases of atonic dyspepsia, and as a mild purgative from the sulphate and chloride of magnesia which it contains; both used internally and as a bath, such a spa should prove of efficacy in gouty rheumatism and muscular neuralgias. A spring which can yield an unlimited supply within a few yards of the beach of one of the most salubrious of our sea-coast resorts, in a neighbourhood with a singularly dry climate and a soil that quickly absorbs moisture, free of moist exhalations, and that by its situation is protected from the severity of the east winds, that are broken by the points of the crescent to which I have already referred, is well worth developing. The drinking water of Felixstowe is singularly pure, being drawn from an

artesian well which is sunk in the chalk. There are plenty of good apartments, charmingly situated villas, and an excellent hotel, which is beautifully situated and within a few hundred yards of the spa. There are pleasant drives in the vicinity, and within an hour and a half's driving distance is the magnificent mansion of Captain Pretyman, situated in one of the most beautiful parks in England; here the visitor may feast his eyes on some of the choicest specimens of Gainsborough, Caravacci, Vandyke, Kock-Koek, Stansfield, and the marvellous masterpiece of Murillo, the Pool of Bethesda (for which, it is said, £20,000 was offered by the Spanish Government and refused), as well as many other works of art, besides figures and busts by eminent sculptors, placed here by the late Colonel Tomline, who was the previous owner of Orwell Park. I may, in passing, mention that a most delightful excursion can be made from Ipswich to Felixstowe, or *vice versâ*, on the Orwell river, or an invigorating and pleasant sail can be had up the Deben to Woodbridge. But my purpose is mainly to draw attention to the medicinal properties of the Felixstowe Spa as a matter well worth remembering by those who may not happen to know of it and who send patients to this pretty watering town on the Suffolk coast. Felixstowe is justly proud of its neat, well-kept and splendidly situated "Suffolk Convalescent Home." One thing only I would add in conclusion, that to render Felixstowe as attractive as its natural advantages claim for it, those in authority or the local magnates should see that its resources for recreation and public enjoyment are attended to, and that the value of its mineral spring is made more apparent by attention to what is called the "Spa House," but which might easily be converted into a neat kursaal, and thus the attention of visitors be drawn to what undoubtedly is a characteristic feature of this charming little town.

Harley-street, W.

THE ANNUAL REPORT OF THE VETERINARY DEPARTMENT OF THE BOARD OF AGRICULTURE.

THE health and prosperity of the live stock of the United Kingdom is of so much importance to the community that the Annual Report of the Board of Agriculture, which deals more especially with some of the contagious diseases of the domestic animals, must always possess a considerable amount of interest for those whose function it is to attend to the sanitary condition and disorders of man. The report for 1891, which has only now, in the last quarter of 1892, been issued, and which has no information with regard to the health of animals in Ireland, is so far satisfactory in that it contains evidence of a diminution in the prevalence of the contagious pleuro-pneumonia of cattle, which has caused almost incalculable damage since its introduction half a century ago, and gives us reasonable grounds for looking forward to its extinction at no distant date. It is stated that during the year the attention of the Department was concentrated on the administration of the Pleuro-pneumonia Act of 1890 in all parts of the country where the disease was discovered. The endeavour to check the disease has not only been attended with heavy cost to the nation, as whole herds have been killed and farms and dairies cleared out, compensation for this destruction being made from the Treasury, but large tracts of country have been placed under severe restrictions in regard to the sale and movement of cattle. This has seriously hampered trade and inflicted grave loss and inconvenience on the owners of cattle. Of course it was to be expected that such drastic measures, which looked like "making a desert and calling it peace," would raise up considerable opposition, as they meant something like ruin to many of those concerned in their operation. But this opposition was little regarded, and it is satisfactory to learn that "the success which has attended the procedure furnishes the justification of the severity of the regulations which it was deemed expedient to enforce in certain scheduled districts while the rest of the country was left quite free from restrictions." From the returns of the cattle slaughtered by order of the Board it would appear that 72·3 per cent. of the diseased animals were cows or heifers, only 1·3 per cent. being bulls. This difference can be explained by the fact that not only is there a great preponderance of cows over bulls, but that the former, as dairy cows, are exposed to influences favourable to the extension of contagious diseases. As the report has it, "pleuro-pneumonia cannot be caused by insanitary surroundings; but when disease has been introduced among a herd by the agency of a living diseased animal the close association of a number of cows in a badly ventilated shed must favour the spreading of the disorder. Besides which, it is at least probable that the artificial conditions under which cows are kept have led to the development of a predisposition which renders them specially susceptible to the malady. At any rate, there is good evidence that the popular idea of the shed cow being the chief source of danger is not without justification." There is reference to some experiments with the meat and milk of tuberculous cattle, but we cannot see that they add much, if anything, to the knowledge acquired long ago. For instance, one of the results arrived at is that thorough cooking is effectual in destroying the activity of tubercle virus, which, we fancy, no one ever doubted. In this connexion we have good authority for stating that in another three or four months' time the promised report on Tuberculosis by the Royal Commission will be forthcoming. The wholesale slaughter of cattle for contagious pleuro-pneumonia has revealed the extent to which the far more serious scourge of bovine tuberculosis prevails in Great Britain. Of the total cattle slaughtered because of being affected with pleuro-pneumonia or having been exposed to infection, 12·22 per cent. were found to be more or less tuberculous; of the cows and heifers in milk or in calf, 16·9 per cent. were tuberculous; of bulls, 1·53 per cent. were thus affected; of other cattle over one year old, 1·2 per cent. were also diseased, as were 1·2 per cent. under one year old. In Midlothian, of the cows slaughtered 22·5 per cent. were tuberculous, and of those in and around London, 15·53 per cent. were in the same state. Anthrax prevailed in fifty counties in Great Britain, the outbreaks amounting to 226, in which 471 animals were attacked, exclusive of horses; but as the Department believes that this dangerous disease cannot be eradicated by repressive measures, nothing is done in the way of introducing measures for the protection of animals on infected lands, such as Pasteurian inoculation, which has proved so satisfactory in France and some other countries. Swine fever, a very fatal and highly contagious and infectious disease of the porcine tribe, prevailed unchecked by the regulations now in force, as the application of these is left to the option of the local authorities, who, of course, are worse than useless in dealing with this class of maladies. Allusion is made to the losses among animals during transit by sea, from which it appears that in cargoes sent from the United States, Canada and the Argentine Republic 5971 cattle and 2665 sheep perished at sea, 323 cattle and 107 sheep were landed dead, and 471 cattle and 113 sheep were so injured as to necessitate slaughter being resorted to at the port of landing.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6514 births and 3837 deaths were registered during the week ending Nov. 5th. The annual rate of mortality in these towns, which had increased from 17·3 to 19·5 per 1000 inthe preceding three weeks, further rose to 19·6 last week. In London the rate was 18·2 per 1000, while it averaged 20·6 in the thirty-two provincial towns. The lowest rates in these towns were 11·3 in Swansea, 14·1 in Derby, 15·1 in Leicester and in Cardiff, and 15·5 in Halifax; the highest rates were 25·7 in Manchester, 26·0 in Blackburn, 26·8 in Wolverhampton, 26·9 in Bolton, and 30·3 in Salford. The 3837 deaths included 434 which were referred to the principal zymotic diseases, against 387 and 406 in the preceding two weeks; of these, 130 resulted from measles, 78 from diarrhœa, 75 from scarlet fever, 70 from diphtheria, 40 from whooping-cough, 40 from "fever" (principally enteric), and one from small-pox. No fatal case of any of these diseases occurred last week in Derby and or in Burnley; in the other towns they caused the lowest death-rates in Halifax, Swansea and Newcastle-upon-Tyne, and the highest rates in West Ham, Croydon, Brighton, Hull, and Salford. The greatest mortality from measles occurred in Brighton, Cardiff, Oldham, West Ham, Hull and Salford; from scarlet fever in Preston and Plymouth; from "fever"

in Preston and Birkenhead; and from diarrhœa in Blackburn, Hull and Wolverhampton. The mortality from whooping-cough showed no marked excess in any of the large towns. The 70 deaths from diphtheria included 47 in London, 6 in Croydon and 3 in Brighton. A fatal case of small-was registered in Leeds, but not one in London or in any other of the thirty-three large towns; 4 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 4067, against 3797, 3936 and 4012 on the preceding three Saturdays; 462 new cases were admitted during the week, against 484 and 410 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 114 to 295 in the preceding nine weeks, further rose last week to 319, but were 74 below the corrected average. The causes of 79, or 2·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Leicester, Bolton, Sunderland, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Balckburn, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the largest Scotch towns, which had increased from 18·1 to 21·3 per 1000 in the preceding three weeks, further rose to 22·9 during the week ending Nov. 5th, and exceeded by 3·3 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·8 in Paisley and 17·4 in Dundee to 25·3 in Leith and 26·1 in Edinburgh and in Aberdeen. The 637 deaths in these towns included 69 which were referred to measles, 13 to scarlet fever, 10 to diphtheria, 6 to diarrhœa, 5 to whooping-cough, 5 to "fever," and not one to small-pox. In all, 108 deaths resulted from these principal zymotic diseases, against 87 and 80 in the preceding two weeks. These 108 deaths were equal to an annual rate of 3·9 per 1000, which exceeded by 1·7 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 12 to 43 in the preceding six weeks, further rose last week to 69, of which 34 occurred in Edinburgh, 17 in Aberdeen, and 1 in Leith. The deaths referred to scarlet fever, which had declined from 16 to 14 in the preceding three weeks, further fell to 13 last week, and included 9 in Glasgow and 2 in Leith. The 10 fatal cases of diphtheria were within 2 of 5 in the preceding week, and included 6 in Glasgow and 3 in Aberdeen. The deaths from whooping-cough, which had been 10 in each of the previous two weeks, declined to 5 last week, all of which occurred in Glasgow. The 5 fatal cases of "fever" exceeded the number recorded in any recent week, and included 3 in Leith and 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 80 to 138 in the preceding three weeks, further rose to 142 last week, but were 68 below the number in the corresponding week of last year. The causes of 78, or more than 12 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·4 and 25·8 per 1000 in the preceding two weeks, further rose to 28·5 during the week ending Nov. 5th. During the first five weeks of the current quarter the death-rate in the city averaged 23·9 per 1000, against 17·6 in London and 21·7 in Edinburgh. The 191 deaths in Dublin during the week under notice included 10 which were referred to different forms of "fever," 3 to scarlet fever, and not one either to small-pox, measles, diphtheria, hooping-cough, or diarrhœa. In all, 13 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 2·0 in London and 7·3 in Edinburgh. The deaths referred to different forms of "fever," which had been 2 and 6 in the preceding two weeks, further rose to 10 during the week under notice, a higher number than in any week since December last. The 3 fatal cases of scarlet fever exceeded those recorded in any week since February, 1889. The 191 deaths registered in Dublin last week included 35 of infants under one year of age and 43 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in any recent week. Four inquest cases and 4 deaths from violence were registered; and 64, or more than a third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING OCTOBER, 1892.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during the month of October in each of the forty-one sanitary districts of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 17·9 per 1000 of the population, estimated at 4,263,294 persons in the middle of this year. Owing to the continued epidemic prevalence of scarlet fever and of diphtheria in London this rate shows a slight further increase upon those recorded in the preceding eight months, which had continuously risen from 5·1 to 17·4 per 1000. Among the various sanitary districts the rates last month were considerably below the average in Kensington, Westminster, St. James Westminster, Marylebone, Strand, St. Olave Southwark, and Lewisham (excluding Penge); while they showed the largest excess in Hackney, Holborn, Shoreditch, Bethnal Green, Mile-end Old Town, and Poplar. The prevalence of small-pox in London showed an increase during October, 10 cases being notified during the month, against 3 in September; of these 10 cases 3 belonged to St. Pancras and 2 to Paddington sanitary districts. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained 6 small-pox patients at the end of October, against 8 at the end of each of the preceding two months; the weekly admissions averaged one only, against 2 in each of the previous two months. The prevalence of scarlet fever in London during October showed a slight further increase upon that recorded in recent months; this disease was proportionally most prevalent in Hackney, Holborn, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, and Bermondsey sanitary districts. The Metropolitan Asylum Hospitals contained 3843 scarlet fever patients at the end of October, against numbers increasing from 1142 to 3407 at the end of the preceding eight months; the weekly admissions averaged 429, against 335, 378, and 355 in the preceding three months. Diphtheria also showed slightly increased prevalence during the month under notice; this disease was proportionally most prevalent in Islington, Hackney, City of London, Bethnal Green, Poplar, St. Saviour Southwark, and Lewisham sanitary districts. There were 312 cases of diphtheria under treatment in the Metropolitan Asylum Hospitals at the end of October, against numbers steadily increasing from 198 to 318 at the end of the preceding seven months; the weekly admissions averaged 57, against 56, 55 and 54 in the preceding three months. Enteric fever was proportionally most prevalent in Islington, Hackney, St. Giles, and Mile End Old Town sanitary districts. The Metropolitan Asylum Hospitals contained 124 enteric fever patients at the end of October, against numbers increasing from 47 to 113 at the end of the preceding five months; the weekly admissions averaged 15, against 14 and 20 in the preceding two months. Erysipelas showed the highest proportional prevalence during the month under notice in Holborn, Clerkenwell, St. Luke, Bethnal Green, Whitechapel, and St. George-in-the-East sanitary districts. Six cases of puerperal fever were notified during October in Islington and 4 in St. Pancras sanitary districts.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary districts, the deaths occurring in the institutions of London having been distributed among the various sanitary districts in which the patients had previously resided. The distribution of these deaths, and especially of those resulting from zymotic diseases, affords the most trustworthy data that can be secured upon which to calculate reliable rates of mortality. During the four weeks ending on Saturday, Oct. 29th, the deaths of 5600 persons belonging to London were registered, equal to an annual rate of 17·1 per 1000, against 17·8, 16·9, and 15·7 in the preceding three months. The lowest death-rates during October in the various sanitary districts were 11·3 in Hampstead, 12·4 in Plumstead, 12·7 in Battersea, 12·9 in Lewisham (excluding Penge), 13·0 in Kensington, and 13·2 in Wandsworth; in the other

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON.—OCTOBER, 1892.

(Specially compiled for THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1892.	Notified Cases of Infectious Disease.								Deaths from Principal Infectious Diseases.									Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fever.	Diarrhœa.	Total.	Annual rate per 1000 persons living.		
LONDON	4,263,294	10	3723	928	1	270	10	33	866	3	5844	179	—	86	124	124	23	—	55	1	125	610	19	5600	17·1	137
West Districts.																										
Paddington	119,199	2	87	15	—	4	—	1	10	—	119	13·0	—	—	4	3	1	—	1	—	3	12	1·3	141	15·4	143
Kensington	160,721	—	86	17	—	6	—	—	12	—	121	9·5	—	2	3	4	—	—	2	—	3	15	1·2	168	13·0	106
Hammersmith	100,642	—	72	31	—	5	—	1	13	—	121	15·7	—	3	5	8	—	—	—	—	1	15	1·9	106	13·7	94
Fulham	98,195	—	94	8	—	5	—	—	9	—	117	15·5	—	—	4	1	1	—	—	—	—	11	1·5	109	14·5	130
Chelsea	97,390	—	77	9	—	5	—	—	24	—	115	15·4	—	—	—	1	—	—	—	—	2	4	0·5	115	15·4	166
St. George Hanover square ..	76,046	—	47	16	—	5	—	1	9	—	77	13·0	—	—	—	3	—	—	1	—	2	6	1·0	89	15·1	102
Westminster	55,203	—	39	5	—	2	—	—	3	—	50	11·8	—	1	2	—	—	—	1	—	1	4	0·9	72	17·0	151
St. James Westminster	24,368	1	10	3	—	1	1	—	2	1	19	10·2	—	—	2	—	—	—	—	—	—	2	1·1	29	15·5	81
North Districts.																										
Marylebone	140,799	—	72	23	1	8	1	1	21	—	131	12·1	—	—	3	7	—	—	—	—	1	3	1·1	157	14·5	100
Hampstead	71,682	—	54	14	—	6	—	1	7	—	82	14·9	—	—	1	2	—	—	1	—	—	4	0·7	62	11·3	112
St. Pancras	224,907	3	178	49	—	19	—	1	55	—	305	17·0	—	3	3	13	—	—	1	—	8	28	1·6	306	17·0	162
Islington	324,451	1	294	101	—	33	—	6	73	—	508	20·4	—	3	7	17	4	—	3	—	13	62	2·1	398	16·0	140
Hackney	235,370	1	313	77	—	25	1	4	53	—	474	26·2	—	1	17	15	—	—	4	—	5	42	2·3	259	16·0	125
Central Districts.																										
St. Giles	29,071	—	37	5	—	6	—	—	9	—	57	19·0	—	—	—	1	—	—	—	—	1	3	1·0	62	20·7	119
St. Martin-in-the-Fields	14,204	—	9	4	—	1	—	—	—	—	14	12·8	—	—	—	2	—	—	1	—	—	5	4·6	33	30·3	143
Strand	24,256	—	15	4	—	1	—	—	—	—	20	10·7	—	—	—	1	—	—	—	—	1	2	0·5	42	22·6	222
Holborn	32,912	—	49	10	—	—	—	—	14	—	73	28·9	—	—	—	2	—	—	—	—	—	2	0·8	66	26·1	277
Clerkenwell	65,482	—	50	12	—	6	—	—	28	—	96	19·1	—	—	1	4	1	—	2	—	1	8	3·2	65	25·9	143
St. Luke	41,850	—	36	5	—	1	—	—	19	—	61	19·0	—	—	1	1	1	—	—	—	1	5	2·0	100	19·9	99
City of London	36,092	1	34	11	—	5	—	—	8	—	59	21·0	—	—	1	2	—	—	—	—	—	3	1·1	38	13·5	42
East Districts.																										
Shoreditch	123,683	—	142	24	—	14	2	1	37	—	220	23·2	—	2	4	6	—	—	3	—	—	21	9·2	182	19·2	147
Bethnal Green	129,408	—	140	76	—	8	1	3	61	—	279	28·1	—	9	8	7	1	—	—	—	—	30	3·0	202	20·3	162
Whitechapel	74,853	—	56	19	—	6	—	1	30	—	112	19·5	—	1	2	3	—	—	1	—	3	8	1·4	137	23·9	131
St. George-in-the-East	45,343	—	47	10	—	1	—	—	17	—	75	21·6	—	3	1	5	1	—	—	—	5	25	7·2	98	28·2	215
Limehouse	57,480	—	67	9	—	3	—	—	10	—	89	30·2	—	2	5	4	—	—	1	—	1	13	2·9	95	21·5	146
Mile End Old Town	107,811	—	146	16	—	15	—	3	35	—	215	29·0	—	—	6	8	—	—	1	—	7	23	2·8	171	29·7	166
Poplar	67,857	—	186	49	—	8	1	2	48	—	294	22·8	—	6	6	4	—	—	4	—	4	24	1·9	278	21·6	125
South Districts.																										
St. Saviour Southwark	26,973	—	21	10	—	—	—	—	8	—	39	18·8	—	1	1	3	—	—	—	—	2	7	3·4	43	22·2	250
St. George Southwark	58,846	1	35	10	—	3	—	—	15	—	64	18·9	—	4	—	4	—	—	3	1	4	18	5·9	122	29·6	178
Newington	116,049	—	115	21	—	5	—	—	35	—	176	19·7	—	7	2	3	—	—	—	—	1	16	1·8	154	17·2	127
St. Olave Southwark	12,787	—	6	1	—	—	—	—	2	—	9	9·2	—	4	1	—	—	—	—	—	—	2	2·0	25	25·5	167
Bermondsey	84,440	—	97	9	—	4	—	1	7	—	118	20·1	—	—	1	2	—	—	1	—	1	4	2·4	110	19·5	114
Rotherhithe	39,459	—	20	9	—	3	—	—	7	—	41	13·5	—	1	1	—	—	—	—	—	—	2	1·4	40	17·8	97
Lambeth	277,917	—	195	63	—	11	2	2	87	—	312	14·6	—	3	5	11	4	—	4	—	14	41	1·9	377	17·7	129
Battersea	156,313	—	182	32	—	4	—	—	31	—	219	20·8	—	—	5	3	—	—	1	—	1	11	3·7	264	25·1	164
Wandsworth	164,003	—	139	22	—	8	—	—	18	—	187	14·9	—	2	5	8	3	—	1	—	4	21	1·7	182	13·7	121
Camberwell	241,465	—	219	36	—	15	—	—	41	—	310	16·7	—	15	6	8	3	—	1	—	4	27	2·0	166	13·2	170
Greenwich	160,734	—	125	26	1	11	—	1	35	—	199	15·3	—	5	6	6	1	—	2	—	6	26	2·0	227	17·4	160
Lewisham (excluding Penge)	74,673	—	27	34	—	2	—	—	10	—	73	12·7	—	—	4	8	1	—	4	—	—	17	2·9	74	12·6	131
Woolwich	41,376	—	34	3	—	3	—	—	1	—	42	13·2	—	—	—	1	—	—	3	—	2	6	1·9	61	19·2	134
Plumstead	91,704	—	71	24	—	1	—	3	10	—	109	15·5	—	4	1	7	—	—	2	1	2	19	2·7	67	12·4	100
Port of London	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 47 cases notified as "membranous croup."

sanitary districts the rates ranged upwards to 23·2 in St. Saviour Southwark, 23·9 in Whitechapel, 26·1 in Holborn, 26·6 in St. George Southwark, 28·2 in St. George-in-the-East, 28·5 in St. Olave Southwark, and 30·3 in St. Martin-in-the-Fields. During the four weeks of October 610 deaths were referred to the principal zymotic diseases in London; of these, 194 resulted from diphtheria, 125 from diarrhœa, 124 from scarlet fever, 86 from measles, 56 from different forms of "fever" (including 55 from enteric fever and 1 from an ill-defined fever), 25 from whooping-cough, and not one from small-pox. These 610 deaths were equal to an annual rate of 1·9 per 1000, against 3·9, 3·4, and 2·6 in the preceding three months. Among the various sanitary districts the lowest zymotic death-rates were recorded in Chelsea, Westminster, Hampstead, St. Giles, Strand, Rotherhithe, and Battersea; and the highest rates in St. Martin-in-the-Fields, Holborn, Bethnal Green, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, and Woolwich. The 86 deaths referred to measles were 35 below the corrected average number in the corresponding month of the preceding ten years: among the various sanitary districts this disease showed the highest proportional fatality in St. George-in-the-East, Bethnal Green, St. George Southwark, and Camberwell. The 124 deaths from scarlet fever were 20 below the corrected average, notwithstanding its epidemic prevalence; this disease was proportionally most fatal in Hackney, St. Martin-in-the-Fields, Bethnal Green, St. George-in-the-East, and Lewisham. The 194 fatal cases of diphtheria were no less than 84 above the corrected average; this disease showed the highest proportional fatality in Hackney, St. Martin-in-the-fields, Clerkenwell, St. George-in-the-East, Limehouse, Mile End Old Town, St. Saviour Southwark, Lewisham and Plumstead. The 20 deaths referred to whooping-cough were little more than one-fourth of the corrected average; this disease showed no marked fatality in any of the sanitary districts. The 56 deaths referred to different forms of "fever" were 29 below the corrected average; there was no marked excess of fever mortality in any of the sanitary districts during the month under notice. The 125 fatal cases of diarrhœa were 52 below the corrected average. In conclusion, it may be stated that the mortality in London during October from these principal zymotic diseases was as much as 18 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 137 per 1000 during October, and was slightly below the average; the lowest rates of infant mortality were recorded in Hammersmith, St. James Westminster, Marylebone, St. Luke, City of London, Rotherhithe, and Plumstead; the highest rates in Chelsea, Strand, Holborn, St. George-in-the-East, Mile End Old Town, St. Saviour Southwark, St. George Southwark, and Camberwell.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

SURGEON-COLONEL P. BURKE SMITH has been transferred from Woolwich to Netley, where he has assumed the duties of Principal Medical Officer in succession to Surgeon-Major-General Hinde, retired. The following officers have arrived home from India on completion of a tour of service:—Surgeon-Major Lane, Surgeon-Captains Hayman and Philson. Surgeon-Captain Lavie has come home on sick leave. Surgeon-Captain Cottell has embarked for Gibraltar on a tour of foreign service. Surgeon-Captain Robinson has been transferred to Fleetwood, Surgeon-Captain Macleod to Canterbury, and Surgeon-Captain Meek to Newry. Surgeon-Major Fox has been transferred from Ballincollig to Cork.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant W. J. Smyth, M.D., A.M.S., has been attached to the Grenadier Guards. Surgeon-Major-General George Langford Hinde, C.B., has been placed on retired pay. Surgeon-Lieutenant-Colonel William F. Burnett has been promoted to Brigade-Surgeon-Lieutenant-Colonel.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant John Michael Harding Martin, M.D., F.R.C.S. Eng., 1st Volunteer Battalion, the East Lancashire Regiment, has been made a Surgeon-Lieutenant.

INDIAN MEDICAL SERVICE.

The following appointments have been made:—Surgeon-Lieutenant-Colonel F. Lyons, M.S., has been appointed a member of the Poona Standing Medical Board. Surgeon-Major A. Peterkin, Medical Staff, has been appointed to the Medical Charge of the Station Hospital, Indore. Brigade-Surgeon-Lieutenant-Colonel R. P. Ferguson has been appointed Administrative Medical Officer in the Bengal Command (Allahabad District). Surgeon-Captains A. F. Ferguson, M.B., K. H. Mistri, G. E. Fooks, and J. W. T. Anderson, F.R.C.S., having completed twelve years' service, to be Surgeon-Major from the date specified, subject to Her Majesty's approval. The following transfers have been made: Surgeon-Captain W. H. Bean, Army Medical Staff, has been posted for duty to the Madras District. The services of Surgeon-Captain A. V. Anderson, M.B., I.M.S., have been placed at the disposal of Government for employment in the Civil Department. Surgeon-Lieutenant P. C. Gabbett, Indian Medical Service, has been posted for duty to the Madras District, and Surgeon-Lieutenant J. L. Macrae, Indian Medical Service, to the Secunderabad District. Brigade-Surgeon-Lieutenant-Colonel W. Gray, I.M.S., arrived at Bombay on the 17th inst. from six months' leave in England. Surgeon-Major-General William Frederick de Fabeck, M.D., I.M.S., Surgeon-General with the Government of Madras, has been granted a good service pension.

NAVAL MEDICAL SERVICE.

Appointments: Fleet Surgeon John Lyon, M.D., to the *Impregnable*. Staff Surgeons: Thomas E. H. Williams to the *Pelican* and George F. Wales to the *Beagle*. Surgeons: Robert Hickson to Bermuda Hospital: Octavius S. Fisher to the *Alacrity*; John Lowney to the *Redpole*; Ernest E. P. Tindall to the *Plover*; E. C. Lomas, M.D., to the *Pigmy*; John Dowson to the *Pembroke*; Bowen S. Mends, R.M.A. Division, Portsmouth; Anthony Kidd to the *Caroline*; Ernest E. Bray to the *Mercury*; Edward G. Swan to the *Archer*; Frederick W. Parker to the *Cambridge*; and Ernest A. Shaw, B.A., M.B., to the *Hearty*.

YEOMANRY CAVALRY.

Herts: William Carus Breedon Revill, Gent., has been promoted to Veterinary-Lieutenant.

VOLUNTEERS.

1st Essex (Eastern Division Royal Artillery): Surgeon-Lieutenant F. W. D. McGachen has resigned his commission. *Rifle:* 4th Volunteer Battalion, the King's (Liverpool Regiment): Surgeon-Captain W. J. Fleetwood, M.D., has been promoted to Surgeon-Major.

THE FRENCH IN DAHOMEY.

According to telegrams, the French losses from casualties in Colonel Dodd's column during the campaign amount to a total of 151, to which must be added, however, the number of those who died from illness on the march from Kotonou to Dakar. There seems to have been a good deal of sharp fighting, especially of late, the official details of which have not yet been promulgated. The *Figaro* publishes some intelligence received from private sources—which is probably of an exaggerated character—as to the very large amount of sickness that exists in the French force. The climate is described as most trying and the inefficiency from fever and sickness of various kinds is alleged to amount to one-fifth of the force. It may be interesting to recall our own military experiences on the Gold Coast. The climate is no doubt a bad one at all times, although it is much less unhealthy during the limited dry season. The wet seasons, of which there are two—from March to May and from August to October—are the most unhealthy. The dry months—from December to March—comprise the healthy season. Malarious fevers and dysentery are the more important diseases. Previously to the Ashanti campaign of 1873–74 the results of our military expeditions in that country were unfortunate, to say the least, if not calamitous as regards the health of the troops employed. A detachment of white soldiers of the Royal African Regiment serving at Cape Coast lost upwards of 90 per cent. of their strength in 1824. The expedition in 1864, designed to undertake the same operations that were subsequently carried out under Sir Garnet Wolseley, suffered from an appalling amount of sickness, and the Royal Marines, stationed on the Gold Coast just prior to the Ashanti expedition, lost eighteen men out of 104; whereas there were only eighty-one deaths from disease and wounds among the 2587 European officers and men composing the force that advanced to Coomassie. The difference in these results was no doubt attributable to the healthy dry season having been selected as the time for the

expedition and to the extreme care taken to provide for all its sanitary requirements.

WATER FAMINE IN TRINIDAD.

The water famine under which the population—amounting to some 40,000 persons—of Trinidad, the principal town at the port of Spain, were suffering in 1891 is alleged to be still present, nothing in the way of remedy having been yet attempted. The matter has been already discussed in the House of Commons, and the late Under-Secretary for the Colonies promised to look into it. It is said that a state of things exists which is simply incredible; that the majority of the householders are without sufficient water for drinking and cooking purposes, to say nothing of ablution and drainage requirements. At the same time it is declared that an almost inexhaustible supply could be obtained from the hills at the back of the town by the expenditure of a few thousand pounds; if so, we cannot exactly understand why the townspeople do not set about organising some practical engineering scheme for utilising this water-supply. With a population of 40,000 it would seem to be possible to carry out locally a public work of such an absolutely essential kind. Are the aid and sanction of the home Government necessary for the purpose? Time was when troops were stationed at Trinidad, but we believe that there are none quartered there at present.

SANITATION IN BENGAL.

An amended Bengal Municipal Bill has been drafted which is likely to prove a very useful measure in the powers it confers upon the Lieutenant-Governor and the municipalities and district boards to enforce sanitation and drainage and establish wholesome water-supplies. The *Pioneer* of the 20th ult. shortly describes the various clauses of the new Bill, and very prudently urges that as measures for sanitation and public works mean the outlay of money they require to be gradually introduced and carried out, otherwise the municipal and district authorities will be rescued from the Scylla of insanitation only to be landed in the Charybdis of bankruptcy. We are very glad, however, to notice that the people and local native authorities of the different districts in Bengal seem to be alive to the necessity of doing what they can towards carrying out sanitary improvements.

THE DEATH OF LIEUT. HUDDLESTON, R.E.

The inquest on this officer, whose death at Chatham was attributed to his having been poisoned by eating tinned sardines or caviare, has been adjourned. The Home Office has directed Dr. Stevenson of Guy's Hospital to analyse the contents of the stomach and the suspected sardines and caviare.

ASSISTANCE FOR CIVIL SURGEONS.

The heads of the Madras Medical Department have made strong representations to the government respecting the lack of surgeons available for civil duty, obliging them to place assistant-surgeons in charge of districts with the inspection of large institutions; and the superintendence of a considerable staff, while there is absolutely no reserve. The authorities recognise the gravity of the position and they ask for a report as to whether the services of local doctors might not be retained.

PERMANENT REST CAMP.

The *Madras Mail* is glad to learn that a permanent Rest Camp for British troops is likely to be formed before long at Madras. Great hardships were experienced by European details last year owing to there being no such camp. An excellent site for the camp, facing the sea and close to the Fort, has been selected.

We have to announce with regret the death of Staff-Surgeon William Dickson Smyth, M.D. R.N., (retired) who died in his 57th year at his residence at St. Leonards and of Surg.-Major T. M. Lownds, M.D. (retired, Bombay Army) who died at Wateringbury, Kent, aged 64.

PRESENTATION. — On Thursday, Oct. 13th, Mr. H. Lewis-Hughes, L.R.C.P. and S. Edin., lecturer to the St. John ambulance class, Dowlais, was presented, in recognition of his services as ambulance instructor during the summer months, with a Morton's ophthalmoscope, bearing the inscription: "Presented to Dr. H. Lewis-Hughes by the Railway and Police Ambulance Class, Dowlais, Oct. 13th, 1892."

Correspondence.

"Audi alteram partem."

"MEDICAL CERTIFICATES AND DEATH REGISTRATION."

To the Editors of THE LANCET.

SIRS,—With reference to your leading article in THE LANCET of Nov. 5th I would suggest that efforts should be made to obtain such an amendment of the Births and Deaths Registration Act of 1874 as shall bring it into harmony with the Coroners Act of 1887 and relieve medical practitioners from much worry, anxiety and responsibility. The profession must take some blame to itself for allowing Clause 20 of the first-named Act to pass as it did in its present form. It begins as follows: "Certificates of Cause of Death.—With respect to certificates of the cause of death the following provisions shall have effect." Then follows Section 1, which deals with the furnishing of printed forms of medical certificates to registered medical practitioners, and needs no alteration. Sections 2 and 3 require amendment; hence I give them *verbatim*: "2. In case of the death of any person who has been attended during his last illness by a registered medical practitioner that practitioner shall sign and give to some person required by this Act to give information concerning the death a certificate stating to the best of his knowledge and belief the cause of death, and such person shall, upon giving information concerning the death or giving notice of the death, deliver that certificate to the registrar, and the cause of death as stated in that certificate shall be entered in the register, together with the name of the certifying medical practitioner. 3. Where an inquest is held on the body of any deceased person a medical certificate of the cause of death need not be given to the registrar, but the certificate of the finding of the jury furnished by the coroner shall be sufficient."

The clause concludes with a requisition for the delivery of the medical certificate to the registrar under a penalty of 40s. Now, these two sections presumably provide for all those cases in which there is no doubt as to the death being a perfectly natural one in all respects, and also for those cases in which there *must* be an inquest. But no notice is taken of the large intermediate class of deaths in which practitioners may have grave doubts as to whether they ought to certify or to refuse to do so. To adopt the first course might subject them to the pains and penalties of Clause 40, which enforces fine and imprisonment for a false certificate, while to refuse a certificate "without reasonable excuse" entails a penalty of 40s.; and even if in adopting the former course the certifying practitioner were relieved from a charge of giving a false certificate, he might still be subjected to great annoyance should an inquest be held and the coroner or jury blame him for giving a certificate at all. On the other hand, the refusal of one, even for the best reasons, subjects him to abuse from the relatives of the deceased; for the giving or refusing a certificate is no longer a matter of choice, but of duty and even compulsion.

The Coroners Act, 1887, Clause 3, defines the following as cases in which the coroner shall issue his warrant for summoning a jury and holding an inquest: "A violent or an unnatural death ..... a sudden death, of which the cause is unknown, or that such person has died in prison, or in such place or under such circumstances as to require an inquest in pursuance of any Act." It is clear that these must comprise many cases in which the deceased had been attended by a registered medical practitioner, who will most certainly be asked to give a certificate. The above Act assumes that the coroner is informed of all such deaths, but does not specify the informant. It seems to me that the first reform required is to amend Section 2 of Clause 30 of the Births and Deaths Registration Act by adding the words, "Should the death have been in all respects a perfectly natural one" between the words "shall" and "sign." The third section might be left as it is, since it will apply to those cases where an inquest is held as a matter of course, and in which a certificate is not asked for—cases of drowning, hanging, murder, manslaughter, accident &c., of which the coroner is informed by the police or other medical informants.

A fourth section should be added. I suggest the following in the hope that all readers of THE LANCET will carefully

peruse them and suggest such alterations and improvements as may occur to them:—"In the case of the death of any person who has been attended in his last illness by a registered medical practitioner, that practitioner shall, should the death have been an unnatural one, or a sudden death of which the cause is unknown, or from violence as a primary cause within twelve months of the death, or should the death have taken place in such place or under such circumstances as to require an inquest in pursuance of any Act, not sign or give a certificate of the cause of death, but shall at once send information of the death to the coroner of the district, either directly or through the coroner's officer or local constabulary." Or the following as an addendum to Section 2: "But no registered medical practitioner is justified in giving a certificate unless he was personally in attendance upon the deceased during the last illness; nor in any of the cases of death specified in Clause 3 of the Coroners Act, 1887. In any or every such case he shall at once inform the coroner of the district," &c., as above.

I am not without hopes that eventually medical practitioners may be remunerated for these certificates, and also that a medical officer analogous to the *médecin vérificateur* of the Continent may be appointed to verify each death, and in other ways to make our Death Registration more perfect. Meanwhile I feel sure that some such changes as I have suggested would tend to simplify the duties of medical practitioners with regard to certificates of death, relieving them from an amount of anxiety and responsibility which they ought not to be called upon to suffer.

I am, Sirs, yours faithfully,

Liverpool, Nov. 5th, 1892. FRED. W. LOWNDES.

"EXPERIMENTS UPON ANIMALS."

To the Editors of THE LANCET.

SIRS,—To question the loftiness of Mr. Berdoe's sentiments would be unkind and rude. It would be worse to cast doubt upon the sincerity of his conviction—a conviction opposed to what is held by nineteen out of twenty among physiological and clinical authorities—that experimentation on living animals is so much wanton cruelty, since it never has done and never can achieve anything for the advancement of knowledge which might not as certainly be achieved by other and unobjectionable means. Inspired by the elevated ideas his writings express, strengthened by fervid convictions and with full mastery of the facts, it seems a pity Mr. Berdoe has not chosen to speak for himself rather than yield himself up as the willing instrument of an anti-vivisection propaganda. Of that propaganda the votaries are in the main intelligent, albeit sentimental, individuals who through long contemplation of imaginary evils and atrocities have allowed themselves to become the victims of a fixed idea. Others are less intelligent and still more impressionable, who are willing to accept at second hand any facts, arguments and conclusions which harmonise with their ultra-humanitarian predispositions. This party during some twenty-five years has been engaged in systematic persistent public vilification of a body of high-minded men, of many of whom at least it may without cant be said that they must be included among the select minority in modern society who have throughout led noble lives, men of whose class Pasteur is perhaps the most striking example, men who by sheer force of intellect and hard work have risen to their eminent position, who in a sordid, money-grubbing age have rejected the wealth which their discoveries might have brought them, have given the fruits of their labours freely to the world and have devoted themselves with perfect singleness of purpose to the one object—the pursuit of truth and promotion of scientific knowledge. When Mr. Berdoe complains that "his party does not receive the justice their cause demands," he strangely ignores such facts as these, and appears curiously oblivious of what has been thrust beneath his eyes within the last few weeks in the public press and notably in *The Times*—namely, the statements of injured individuals (physiologists and surgeons) who have brought forward ample proof that they have been most shamefully and foully libelled in the publications of the Society which Mr. Berdoe defends and supports.

I am, Sirs, yours truly,

Wimpole-street, W., Nov. 5th, 1892. HENRY SEWILL.

To the Editors of THE LANCET.

SIRS,—There is a fallacy in the argument of Mr. Bowreman Jessett which I trust you will permit me to discuss. He seems to assume that the use of decalcified plates, or some similar contrivance, is essential to the successful union of divided intestine, and concludes that because Senn and others (best of all, my old pupil, Dr. F. Byron Robinson) have made experiments on animals with these plates that the success of intestinal surgery is due to such experiments. No conclusion could be more fallacious.

Years before the experiments of Senn, Robinson or Jessett were ever heard of I had successfully applied the flap-splitting method to the union of intestine. I have used it in some two or three scores of cases, and have failed only once. Nothing could be simpler or more effectual than this method; nothing, in my opinion, could be clumsier than the plates, bobbins &c., which I have seen recommended by various authorities. Resection of the intestine does not differ in any one of the principles involved, nor very much in details. In whatever part of the intestinal canal it is practised "Pylorectomy" has nothing therefore to single it out as a case where experiments on animals are required more than in other parts of the intestine. But if Mr. Jessett wishes to claim for it such a character I will grant his premise at once, because it is one of the class of operations which I utterly condemn. I have never done it, and I never shall, for the disease is malignant nine hundred and ninety-nine times in a thousand, and inevitably returns. In the odd case where the disease is not malignant the operation of pyloric dilatation (Loreta) has been shown to be sufficient. We now know also that such operations as gastro-enterostomy lead to permanent and continuous fæcal regurgitation, so that the whole scheme of such operations is gradually being dropped. This is the fate I predicted for them years ago, and if Mr. Bowreman Jessett claims for them an origin in experiments on animals, I gladly let him have it; they are worthy of such a fallacious origin. I know of no operation in intestinal surgery to which I would myself submit which I had not performed many times and many years before the dates given by Mr. Jessett.

I am, Sirs, yours faithfully,

Nov. 8th, 1892. LAWSON TAIT.

To the Editors of THE LANCET.

SIRS,—Mr. Jessett and Dr. Clarke have mistaken the point of my letter, and it would almost appear from their remarks that I was siding with the anti-research agitators. My object in writing was that the public should have full opportunity of hearing our side of the question, and this can only be done by a more systematic method of educating the public upon the use and morality of animal experimentation than has existed in the past. I would suggest that the published works of the Society for the Advancement of Medicine by Research should be made more public and popular, that the Society should have in readiness one or more trained lecturers to combat the errors of the anti-vivisectionists, and that the pamphlets of the Victoria-street Society should undergo a critical examination; and this last seems now more than ever necessary. The educated people are almost wholly with us; but as almost everyone now has a vote—and one vote is equal to another in a Parliamentary sense—it is necessary to correct the false views of the ignorant, so that a catch vote adverse to scientific research may not be taken in the House of Commons; for, after all, it is with the Commons that the power for good or evil in this matter rests.

I am, Sirs, yours truly,

Folkestone, Nov. 7th, 1892. W. J. TYSON, M.D. Durh. &c.

"CHLORIDE OF ETHYL."

To the Editors of THE LANCET.

SIRS,—I am sure that all dental surgeons will be much obliged to Dr. Radcliffe Crocker for the warning he gives as regards the use of chloride of ethyl. I have used it pretty extensively for several months in extracting teeth, making incisions in the gums &c., but I have not observed any of the untoward symptoms which Dr. Crocker's patient exhibited. I use on an average about one-quarter to one-third of a small tube, and I think it advisable to break the neck of the tube as near its extremity as possible, in order to obtain a fine stream and a perfect and rapid evaporation. To effect the same purpose also the tube should be held a considerable distance from the spot to be frozen, say eight to twelve inches. Dr. Crocker's letter, I am sure, will have the effect of placing all users of this anæsthetic upon their guard.

I am, Sirs, yours faithfully,

Harley-street, Nov. 8th, 1892. WM. RUSHTON.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Moss-side and Incorporation.

THE old question of amalgamation between this district and Manchester has once more been revived by a recent application on behalf of the Moss-side Local Board for power to borrow some £50,000 for sewerage purposes, one result of this application being a protest on the part of influential ratepayers against this heavy expenditure, and a request that the local board should reopen negotiations for amalgamation with the city, in which event the whole of this outlay would be saved to the ratepayers. The usual inquiry by a Local Government Board inspector has been duly held, but that board have postponed the giving of their decision pending the result of a poll of the ratepayers, which the local board have been requested forthwith to obtain. Strangely enough the Moss-side authorities, although appealed to by a large number of the most important residents in the township, have flatly refused to submit the question to the judgment of the ratepayers. The township of Moss-side is to all intents and purposes a part of the community known as Manchester. The inhabitants of the township avail themselves freely of all our public institutions—the parks, museums, libraries, markets, abattoirs, school boards, hospitals, cemeteries, public baths &c., all of which are supported out of the city rates, but they object to contribute anything to the cost. The position of Moss-side in refusing to bear its due share of a public expenditure, the advantages of which, nevertheless, its inhabitants do not scruple to enjoy, is one which is wholly selfish and unworthy. Should the refusal of the Moss-side board to reopen the question of amalgamation be confirmed by the ratepayers, then the latter, in order to discharge their obligations in regard to the sewerage of their district, will have to submit to a wholly unnecessary expenditure, probably much exceeding the estimated £50,000. And even supposing the sewerage difficulty to have been surmounted by this heavy outlay, it is well known both in the city and in the township that amalgamation will only be postponed thereby, and that its ultimate accomplishment cannot long be delayed.

Relief for the Sufferers from Cholera.

On Saturday last an entertainment was given at the Prince's Theatre in this city in aid of the funds of the Association for the Relief of Sufferers by the Cholera Epidemic in Hamburg. The attendance was very large, and the programme of music which was selected by Mr. Wilz Hess was highly appreciated. As a result of the exertions of the relief committee, it is believed that a sum considerably exceeding £500 will shortly be forwarded to the sufferers.

Fever Hospital Provision for Mid-Cheshire.

At the last meeting of the Sale Local Board the medical officer of health reported an outbreak of infectious disease within his district. In several of the cases the patients were isolated at the Monsall Hospital, with the fortunate result of staying the spread of what might have been an extensive epidemic of scarlet fever. The medical officer, however, remarks upon the great distance of Monsall, some eight miles from Sale, as being a serious drawback to the extensive use of the hospital by the inhabitants of his district. The present would appear to be a convenient opportunity for reopening the question as to whether fever hospital accommodation for the whole of the rural districts of this county should not forthwith be provided. The Mid-Cheshire sanitary districts might usefully combine for this purpose and provide two or more small hospitals at suitable parts of the county, which would be available for such an emergency as that which has lately befallen the Sale Local Board.

The Unemployed in Manchester.

At a recent meeting of the Manchester Guardians it was reported that a considerable increase in the number of vagrants had recently taken place. Careful inquiry revealed the fact that these vagrants are not all of the "loafer" class who usually frequent our tramp wards, but that at the present time there are many artisans out of work. The men appear to be tramping from place to place in search of work, which just now seems to be scarce. The annually recurring and difficult problem of how best to deal with the unemployed who in the winter months present themselves for relief in such large numbers at the workhouse doors is this year still further complicated by the circumstance that some 50,000 of the cotton workers of the district have "gone out on strike" rather than submit to a temporary 5 per cent. reduction in their wages, which reduction the Masters' Association declares to be inevitable. The outlook for the coming winter is indeed a gloomy one.

Stretford and Artisans' Dwellings.

The local board of Stretford have recently determined to put in operation the Housing of the Working Classes Act for the demolition of a block of insanitary property known as Diamond-court, which has long been regarded as an eyesore in the district. Something less than 200 persons will be displaced by this scheme, which involves the clearing of the land and the rehousing of about half the people on an adjoining site which is to be purchased from Sir Humphry de Trafford. The land in this neighbourhood is steadily becoming more valuable by reason of its proximity to the docks of the Manchester Ship Canal, and this board are of opinion that on this account the carrying out of their first scheme under the Housing of the Working Classes Act will add very little to the rates of the district.

Clinical Society of Manchester.

The annual meeting of the above Society was held on Tuesday, Nov. 1st, when the following officers were elected:—President: Dr. T. C. Railton. Vice-presidents: Dr. James Holmes and Mr. C. F. H. Kitchen. Treasurer: Dr. C. H. Braddon. Librarian: Dr. J. F. Le Page. Committee: Mr. W. Bain, Dr. H. W. Boddy, Dr. E. Stanmore Bishop, Dr. S. Buckley, Dr. J. Brassey Brierley, Dr. K. M. Chisholm, Dr. J. C. Eames, Dr. J. Earle, Dr. A. Hirst, Mr. W. E. Husband, Dr. W. Milligan, Dr. C. G. L. Skinner, Dr. A. Wahltuch, Mr. R. W. Walsh, and Dr. J. B. Wilkinson. Auditors: Mr. E. Roberts and Mr. J. Paulin. Hon. Secs.: Dr. A. Hill Griffith and Dr. Herbert Lund.

Manchester, Nov. 8th.

MIDLAND COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Hospital Sunday, Birmingham.

Sunday, Oct. 31st, was the appointed day for the collections. The amount contributed was £4715 1s., which this year goes to the General Hospital.

The Tendencies of the Age.

These tendencies may be gathered from the wording of a debate which took place at the Birmingham and Edgbaston debating society on the 2nd inst. It was announced as follows:—"That as the hospitals of the city, which exist for the benefit of the whole of the community, and especially for the benefit of the medical profession, are now so largely supported by the artisan classes they should be considered cooperative institutions rather than charities." This proposition was ably argued and strongly contested, with the result that it was lost by a large majority.

Corporal Punishment in Birmingham Board Schools.

This subject has lately given rise to considerable agitation among the teachers in the city schools, owing to one of the head masters having been fined for an assault. The certificated teachers of the Board schools complain that the regulations on this matter are a constant source of worry, greater than all the other scholastic difficulties put together. They have decided to memorialise the board, and to endeavour to get the subject discussed apart from prejudice and feeling.

Drug Stores.

There are, it was said at a meeting of the Midland Counties Chemists' Association, oil and colour stores where drugs are sold by unqualified men in direct contravention of the Pharmacy Act, prescriptions being dispensed and poisons sold in such a manner as to make the Act a delusion and the sale a snare to unsuspecting persons. No doubt this can be remedied by some vigilance on the part of the Pharmaceutical Society. Counter-prescribing also is an evil which affords abundant scope for being rectified; a few examples of punishment would go far to check the harm often done in this manner and would be a protection to the public.

Hospital Dinner.

At the General Hospital, Birmingham, on the 2nd inst., a dinner was given by his colleagues on the committee to Sir

John Jaffray, Bart., in recognition of the honour conferred upon him, and of his long association with the hospital. The proceedings were marked by enthusiasm, by interesting retrospects and hopeful promises for the future.

Nov. 9th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Deaf and Dumb in the North.

AT a meeting of the Committee of the Deaf and Dumb Institution in Newcastle for the Northern Counties it was decided to take steps to extend the building. This resolution was proposed by the chairman, Dr. Philipson, and was carried unanimously. The present building was erected upwards of twenty-five years ago, when the inmates numbered only sixty, and was constructed to accommodate ninety. The present number of pupils under instruction is 126, and upwards of twenty other cases are eligible for admission. It is estimated that the last census, not yet published, will show that in the four northern counties for which the institution was established the number of deaf and dumb children of school age is from 190 to 200. When the Education Bill (Deaf and Dumb) now pending becomes law and attendance becomes compulsory, accommodation will have to be provided for this number.

St. John Ambulance Association, South Shields Centre.

The annual report of the St. John Ambulance Association, South Shields Centre, shows that the work of the Association is progressing. The number of candidates who received first-aid certificates and medallions was 274. Seventy-one railway *employés* have passed through the classes during the year.

The Thirsk Railway Accident.

It is reported from Thirsk to-day that the driver of the Scottish express, Ewart, who is in a very critical state, has passed a bad night. Mr. Buchanan is said to be doing well. Head, the fireman, is also said to be doing well. Mr. Fred Page, surgeon to the Newcastle Infirmary, has been requested by the company to visit some of the injured.

Small-pox in Yorkshire.

An outbreak of small-pox is reported as having occurred at Otley, not far from Leeds. Twenty persons are known to be affected. Prompt steps are being taken to stamp out the epidemic, and among other measures a temporary hospital is being erected and vaccination and revaccination are being adopted upon a large scale. It is hoped that the affection may be prevented from spreading into the large towns.

Typhoid Fever in Durham County.

In the Chester-le-Street sanitary authority and other districts in the county of Durham there has been observed a growing increase of typhoid fever. Dr. Duncan of Chester-le-Street says that, as well as forty-eight notifications of scarlet fever during the month, twelve cases of typhoid fever have been notified. In one house there were three cases of typhoid fever; in the same house there was an outbreak of that disease last year.

Death from a Kick at Football.

On Saturday last a boy named Harold M. Stevenson, eleven years of age, a pupil at the Society of Friends' school at Wigton, near Carlisle, died from the effects of a kick whilst playing football in the school ground on the previous Saturday. During the match there was a scuffle and the boy sustained injuries on the thigh, and his death resulted after much suffering.

The Dangers of Gas-heating for Baths.

I have frequently recorded in these notes fatal accidents from gas escaping in bath-rooms. If the gas is imperfectly lighted or the fumes of the combustion are not allowed to escape there is certain to be peril in the bath-room. Last week two boys were found insensible from this cause in a bath-room at South Shields, and it was shown that had it not been for the promptness with which two police-constables acted in performing artificial respiration the boys would have died.

The Tramp Question.

The master of the Knaresborough Union, Mr. G. Paul, has just read a paper on Vagrancy at a conference of the Poor-law unions of Yorkshire, in which he holds that three-fourths of the tramps are irreclaimable, and he contends that it is a disgrace to society that hundreds of poor children should be left in the hands of merciless and remorseless men and women, to be dragged over miles of country, through suffering, sin and shame. Of the remaining fourth of the vagrants, Mr. Paul asserted that a large proportion were Army Reserve men or men who had been in the army, and unless something were done he was afraid that the ranks of the professed tramp would be recruited from this section. Of the remainder, he found that the tramp ward was a sanctuary to those fleeing from justice. To remedy this condition of things he suggested that something more ought to be attempted in the way of providing employment for discharged soldiers and sailors, and the honest casual might be provided with a "livret" stating the course of his journey, and thus passing him from one union to another without difficulty.

Poison in the Porridge.

At Rotherham last week Mrs. Woods, Albert Woods (her son), and a lodger named Middleton, after partaking of oatmeal porridge, were seized with symptoms of poisoning. The two men died the next morning. Middleton was a rat-catcher, and the supposition is that some poison used by him had become accidentally mixed with the oatmeal used for the supper porridge.

Great Run of Salmon in the Solway.

There was a great run of salmon in the Solway rivers last week. For some weeks previously the low condition of the rivers has caused salmon to gather at the mouths of the rivers on their way up to the spawning beds, but one day placed the rivers in excessive floods, and when they commenced to fall immense numbers of salmon ran up. During the course of one afternoon many hundreds of fish were seen going over the falls at Annan Bridge. Many of the salmon were judged to be over 36 lb. in weight. A whale, measuring 43 ft. in length, was last week towed into Aberdeen by the Grimsby smack, *Catherine*. The monster was caught off our Northumberland coast near the Farne Islands. The seal a few years ago was common enough about the Farnes and Holy Island, but I believe it has not been often seen of late. I suppose the steamer traffic on the coast has disturbed it from its habitat.

Newcastle-on-Tyne, Nov. 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medical Societies.

THE Medico-Chirurgical Society held the first meeting of its seventy-second session on Wednesday of last week. Dr. Joseph Bell continues in the presidential chair for the new session. Dr. Troup, the treasurer, having resigned, Dr. Mackenzie Johnstone was appointed to the post, and Mr. F. M. Caird, one of the secretaries, was succeeded by Mr. Hodsdon, and Dr. W. Russell was reappointed. Dr. W. Craig was reappointed editor of the Transactions. The meeting was held in the Royal College of Physicians, which had been kindly lent, as the Society has been unable to find a suitable place of meeting and it has no hall of its own. The first item of public business was a paper by Dr. William Russell on Some Practical Results of the Investigation of Cholera in Germany, with a demonstration of the comma bacillus and its appearances in plate and tube cultures. The paper referred to his experience in Berlin and Hamburg. It led to considerable and varied discussion, and on the motion of Dr. James Ritchie, seconded by Dr. Allan Jamieson, it was unanimously agreed that it be remitted to the Council to memorialise the Lord Provost and the Public Health Committee, with the view of having bacteriological laboratories established in connexion with each cholera hospital, supervised by a properly instructed medical man. The second item on the billet was a paper by Mr. A. G. Miller on Arthrectomy of the Knee-joint, giving the results of thirty-five cases. Owing to the late hour Mr. Miller, unfortunately, could only give an abstract of his paper, and there was no discussion on it, which is to be regretted, as the subject is such an important one. From the abstract, however, it appeared that Mr. Miller had obtained excellent results in thirty out of the thirty-five cases. The paper will be published in full.—At the first meeting of the Pathological Club Dr. Noël Paton was appointed secretary, in succession to Dr. A. Bruce.

Typhus Fever in Leith.

During the past week there have been 8 new cases of typhus fever in Leith, against 7 in the preceding week. The epidemic of measles and of scarlet fever continues.

Health of Edinburgh.

The mortality last week was 127, making the death-rate 25 per 1000. Diseases of the chest caused 46 deaths and zymotic diseases 37, of which 34 were due to measles. The intimations for the week comprised: typhoid fever, 4; diphtheria, 2; scarlet fever, 59; and measles, 368.

Glasgow: Small-pox and Scarlet Fever.

The most striking features of the last public health report are the unusual prevalence of small-pox and scarlet fever. A fortnight ago the presence of the former disease in the city in a mild form was recognised and medical practitioners were warned of its existence. As was expected, the disease has spread, and in the beginning of this week no fewer than twenty-four cases of small-pox were recognised. This is by far the largest number certified since the spring of 1884. All the cases are more or less modified by vaccination in infancy. The epidemic of scarlet fever shows no sign of abating; beginning in one of the southern districts in August last, it has since steadily spread. Four weeks ago 970 cases were reported, three weeks ago 1029 cases, two weeks ago 1103, a week ago 1194, and at the beginning of the present week 1235 cases. Of these, 875 are in hospital. In presence of this enormous increase of fever patients the sanitary authorities find themselves in a difficulty. The hospital accommodation is now strained to its utmost, and already some of the space reserved as a rule for small-pox has been occupied with scarlet fever cases. As there is every likelihood of small-pox as well as scarlet fever spreading still further, the sanitary authorities have approached the town council for "full powers to take such steps as in their judgment they may think necessary to meet the circumstances of the case." To the credit of the council, the gravity of the situation was recognised and the requisite powers were granted.

Conversazione to Nurses &c. at Glasgow.

The close of Sir John Muir's reign as Lord Provost of Glasgow has been marked by a kindly and graceful act of hospitality—a conversazione in the municipal buildings, to which were invited the directors, medical and surgical staff and the nurses of the various infirmaries and other similar institutions in and around Glasgow. A company of about 800 responded to the invitation. Short addresses by Sir John Muir, Professor Macewen and others, some excellent music and dancing, passed the time pleasantly till midnight. The nurses appeared in their ward dresses, a feature which lent unusual colour and interest to the assembly.

Royal Infirmary, Glasgow.

Professor Macewen's former place on the staff of the Royal Infirmary is now occupied by Dr. D. Newman, whose appointment has just been announced. Dr. Samson Gemmell's removal from the Royal to the Western Infirmary leaves a vacancy on the physicians' side of the staff which has not yet been filled up, though it is expected that Dr. Geo. J. Middleton will gain the coveted step.

Nov. 10th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons.

AN election for a member of Council in the room of Mr. Barton, resigned, will be held on Monday, the 14th inst. In addition to the name of Professor Heuston, already mentioned, may now be added that of Dr. Cranny.

Royal Academy of Medicine.

The first meeting of the Academy for the present session took place on Friday evening, the 4th inst. The first paper in the Section of Pathology was a Case of Traumatic Malignancy, which was read by Mr. Graves, and which occurred in the practice of Dr. Wheeler. Three weeks after an injury received there was malignant sarcoma of bone formed which necessitated amputation above the knee. Dr. Bennett, who presided, mentioned a case where malignant sarcoma occurred within three weeks without any injury having been received. Recurrence, he added, generally takes place in some internal organ.

Richmond Hospital Dinner.

The annual dinner of the medical staff was held at the Shelbourne Hotel on Saturday last. The toasts included the "Universities and Colleges of Ireland," "The Staff" and the health of the chairman, Mr. William Thomson.

Dublin Hospital Sunday.

The annual collections in aid of the Dublin hospitals will be held on Sunday next, the 13th inst. Last year the total receipts amounted to £3982 19*s.* 5*d.*, being a decrease of £205 3*s.* 6*d.* as compared with the previous year; while the total amount collected since the foundation of the fund is £73,469 16*s.* The hospitals' football match will take place on Saturday next, when teams from the county Dublin and the united hospitals will have a friendly contest.

Rotunda Lying-in Hospital.

Sir George H. Porter, Bart., M.D., surgeon-in-ordinary to Her Majesty and senior surgeon to the Meath Hospital, has been appointed consulting surgeon to the Rotunda Hospital, in the room of the late Surgeon Colles.

The Ulster Medical Society.

The first annual meeting of the Ulster Medical Society for the present session was held on Wednesday, Nov. 2nd, when Dr. O'Neill, President, resigned the chair into the hands of the incoming President, Dr. Whitaker, medical officer of health for the city of Belfast, who delivered a very interesting address on sanitation and public health, for which he was accorded the hearty thanks of the Society on the motion of Mr. M'Connell, seconded by Professor Whitla. The Society then considered and passed the annual report and also a code of rules (with several alterations) in reference to medical ethics.

The Winter Session at the Medical School, Belfast.

The winter session of the Medical School began on Nov. 1st, when Dr. Nelson gave the introductory address at the Royal Hospital, before a very large audience of the students and the medical staff. He strongly advised the students to study at the bedside, and recommended accuracy in diagnosis as of the utmost moment. He showed, by a number of clinical cases, how, in ophthalmic practice, the symptoms might be very much alike to a careless observer in many different conditions, and he emphasised the fact that treatment could only be scientific and accurate when based on a sound diagnosis. The only change at the hospitals is the resignation of Dr. Burden, pathologist to the Royal Hospital. All his colleagues regret sincerely that, owing to serious illness, he has been obliged to retire. No successor has yet been appointed. At Queen's College, Belfast, Dr. Dill, Professor of Midwifery, has, through ill health, been unable for the present to meet the class. Dr. John W. Byers has been appointed as locum tenens and began lecturing on Tuesday.

Belfast Branch of the Royal Medical Benevolent Fund Society of Ireland.

At the quarterly meeting held last week a letter was read from the hon. secretary, Dr. H. Burden, tendering his resignation owing to ill health. A resolution was passed accepting Dr. Burden's resignation and placing on record the sense that the members felt of the valuable services rendered by him to the Society during the past eight years, and sincerely regretting the serious illness with which he is afflicted, and tendering their sympathy to his family and himself. Dr. John McCaw was appointed as secretary until the annual meeting.

Among the passengers of the ill-fated *Roumania* was Miss Mary E. M'George, an Irish lady, belonging to the Zenana Mission.

Mr. F. Odevaine, F.R.C.S.I., has been elected ophthalmic surgeon to St. Vincent's Hospital, Dublin.

Cork Hospital Saturday collections have realised £349.

The death is reported of Francis Dancey Hamilton, F.R.C.S., at Navan, on the 3rd inst. Mr. Hamilton was late surgeon to the County Meath Infirmary.

Nov. 9th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Hydrochloro-sulphate of Quinine.

IN utilising the anti-malarial properties of quinine in fever districts economical considerations militate strongly in favour of the hypodermic method of administration. The soluble salts of quinine which are at our disposal for this purpose are: the acid sulphate (solubility 1 in 12 of water), the lactate (1 in 10), the acid hydrobromate and the hydroclorate (each 1 in 6). To these salts must now be added yet another, the hydrochloro-sulphate, discovered by M. Grimaux (Société de Biologie, Oct. 29th). This double salt is said to be soluble in its own weight of water at the ordinary temperature, a great advantage for injecting purposes. In the crystals, which contain three molecules of water, the proportion of the alkaloid is 74·21 per cent. The density of the crystals allows of its administration in effectual doses in much smaller wafers than is the case with the light feathery sulphate. The therapeutic properties of this new addition to our anti-periodic drugs have been studied by M. Laborde, and he pronounces them to be fully equal to those of the ordinary sulphate, its effects being, however, more rapid.

Cholera and Inoculation.

Some remarkable facts relating to the prophylaxis and even cure of cholera by inoculation have lately been elucidated by Dr. Ketscher of St. Petersburg, whose researches, conducted in Paris in Professor Strauss' laboratory, formed the subject of a communication made to the Société de Biologie on the 29th ult. by M. Gamaleïa. For the experiments leading up to the discovery the most intensely virulent cultures of cholera germs hailing from Massouah were employed, the subcutaneous intra-peritoneal and intra-venous methods being all had recourse to. In order to test the protective powers of the milk of inoculated goats it was injected into the peritoneal cavity of guinea-pigs. The injection of 5 cc. of the milk conferred complete immunity on guinea-pigs against a fatal dose of cholera culture of ½ cc. injected into the peritoneal cavity, while animals not injected invariably succumbed in from six to ten hours. In order to prove that the milk conferred resisting powers on the entire system of the guinea-pig, and did not merely destroy the virulent germs, it was injected into the peritoneal cavity while the dose of cholera poison was introduced into the muscles of the hind leg. The result was identical—the inoculated animals survived while the unprotected ones died. The precaution was taken of testing the presence of any protective properties in the milk of goats which had not been inoculated, and the absence of such properties was conclusively demonstrated.

Professor Verneuil's Farewell Lecture.

No Paris surgeon is probably better known abroad than Professor Verneuil. Many hundreds of our compatriots must have followed him through his wards at the Pitié and Hôtel Dieu Hospitals. His geniality has endeared him to generations of students, while his facility of expression and clearness of language have rendered his clinical lectures models of scientific eloquence. The rapid approach of the age limit prescribed by the regulations of the Paris faculty would in the ordinary course of things soon have compelled the retirement of this distinguished surgeon from the chair of clinical surgery, which he has so well filled for many years. He has anticipated that event by tendering his resignation, and on Saturday last he made his last bow as a lecturer to a crowded audience assembled under the presidency of the Dean, Professor Brouardel, in the large amphitheatre of the Faculty. Many of the retiring professor's colleagues were present, and the appearance of the veteran *conférencier* at 8.30 P.M. was the signal for loud and prolonged cheering, which was renewed again and again at the end of the lecture.

Nov. 9th.

LITERARY INTELLIGENCE.—*La Semaine Médicale*, which has for some little time been publishing a Spanish edition, announces that this venture has been so successful that arrangements are being made to publish an English edition. The first number will appear next month.—A new Belgian medical journal, *La Policlinique de Namur*, has just appeared. It will be published monthly.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of the Royal College of Surgeons, held on the 10th inst., Mr. Thomas Bryant, President, in the chair the minutes of the quarterly meeting of the Council of Oct. 13th were read and confirmed.

The minutes of the committee for general purposes were read and confirmed, and it was agreed that the following be the regulations of the common room for Fellows and Members:—1. The common room is open only to Fellows and Members of the College. 2. The common room is open on each week day from 11 A.M. to 5 P.M., except Saturday, when it is open from 11 A.M. to 1 P.M. It is closed during September, and at such other times as the Council may direct. 3. No formal meeting of any description may be held in the common room. 4. Fellows and Members writing letters at the College may not use the College as their address. N.B.—Fellows and Members are reminded that smoking is not permitted in any part of the College buildings. It was also decided that, as recommended by the committee, writing materials and such journals and newspapers as the committee may from time to time determine be provided for the common room. This room will be opened on Dec. 1st.

It was agreed to carry out alterations in the drainage of the College premises at an estimated cost of over £150. It was agreed, on the recommendation of the Conjoint Board, to recognise instruction in chemistry, physics, practical chemistry and elementary biology at the following institutions as fulfilling the requirements of the regulations for admission to Parts 1 and 3 of the First Examination—viz., University College, Bristol; the Public School of Science, Cheltenham; the School of Science and Art, Chester; the Merchant Venturers' School, Bristol.

The President reported the proceedings at the meeting of Fellows and Members on the 3rd inst., and stated that, in addition to sixteen members of the Council, there were present at the meeting twenty-seven Fellows and forty-three Members.

He also read the following motion, brought forward at the meeting and not carried, ten voting for and sixteen against the same—viz.: "That this meeting of the College of Surgeons of England is of opinion that the report now presented is ineffective and incomplete"; and the following resolutions carried at the meeting—viz.:

1. "That this meeting is of opinion that the ancient attitude of hostility on the part of the Council to the true interests of the body corporate of the College ought to terminate, and that the repeated resolutions passed at former meetings of this College should be carried into effect." Carried by twenty-five to ten. With regard to this resolution it was agreed that the mover and seconder be informed that the resolution has been laid before the Council.

2. "That this meeting of Fellows and Members be desired to thank the Council of the College for acceding to their wishes in the matters (*a*) of separate meetings of Fellows and Members and (*b*) of the provision of a common room in the College." Carried, with one dissentient. The mover and seconder to be informed that their resolution has been received by the Council with thanks.

3. "That this meeting of Fellows and Members wishes again to impress upon the Council that it is absolutely essential for the welfare of the College that the Fellows and Members should be consulted before any change is made in the constitution and external relations of the College, and before the College be committed to any extraordinary expenditure on buildings or otherwise." Carried by twenty-two to two. The mover and seconder to be informed that the resolution has been laid before the Council, and that they be referred to the following extract of minutes of the Council dated Nov. 17th, 1885:—"With the larger questions which more rarely arise, such as those which concern the constitution of the College, the case would be different. On these questions the Council will always be glad to have an opportunity, so far as practicable, of consulting the Fellows and Members."

The Council elected a committee on the arrangements for the jubilee of the Fellowship. The following were appointed: Messrs. Hulke, Willett and Harrison, with the President and Vice-presidents, and they were authorised to add to their

number Fellows not on the Council, to consult about the arrangements for the dinner.

Permission was granted to Mr. James Galloway to deliver the Morton lecture in the theatre of the laboratories on the Embankment. This lecture to be given on Feb. 2nd, 1893, at 4 P.M.

The President stated that the vacancy on the Court of Examiners which would be occasioned by the expiration of Mr. Heath's period of office on Dec. 8th next would be filled up at the ordinary meeting of the Council on that date.

Medical News.

UNIVERSITY OF EDINBURGH.—The following candidates have received the degrees of Bachelor of Medicine and Master in Surgery :—

William Corsar Anderson, Scotland; Arthur Reginald Bankart, Wales; Frederick Morrison Black, Scotland; Nathaniel Troughton Bond, England; W. J. Walker Winifield Borthwick, Scotland; John W. Parker, Scotland; Albert Cameron, Scotland; Archibald Nathaniel Shirley Carmichael, Scotland; Jas. Ojoye, Coker, Africa; Jas. Cowie, Scotland; Victor Mackay Daly, India; Robert Hugh Drennan, Ireland; Alexander M'Beth Elliot, Scotland; John Robert Foster, England; David Fraser, Wales; Murray Gillespie, Scotland; Thomas Arthur Granger, Scotland; Percy Frere Grant, Scotland; Frederick Thresher Griffin, England; Josiah Field Hall, England; Arthur Ainslie Hudson, England; John Edmund Knox, England; Henry Latham, England; Andrew Thomson Law, Scotland; William Lawton, England; Arthur William Bligh Livesay, England; George Francis Longbotham, England; David William Knyvett Lyall, India; Alexander Minto M'Donald, Scotland; James McFarlane, Scotland; Angus Vallance M'Gregor, Scotland; Murdo Mackay (M.A.), Scotland; William Crawford Macknight, Australia; William M'Lean, Scotland; Thomas Muirhead Martin, Scotland; Charles Edmund Maude (B.A.), New Zealand; Rodon Tregarthen Michell, India; John Oswald Morrison, Scotland; Donald Geo. Macleod Munro, Scotland; Andrew Newall (B.A.), Scotland; Aelan Anderson O'Hara, Australia; John Owen, Wales; Malcolm Parkinson, England; Horace James Pechell, England; John Donald Pollock, Scotland; Walter Midgley Robertshaw, England; Arthur Clement Stamberg, India; Cecil Edward Stephens, England; John Bell Thomson, New Zealand; Frederick Richd. Van Langenberg, Ceylon; Alban Ward, England; Alfred John Wheatley, England; Charles Webster Williams, Wales; Griffith Jones Williams, Wales; James Gordon Williamson, on India.

The following candidates were successful at the B.Sc. (Public Health) Examination :—

Robert Martin Beatie (M.B.), New Zealand; John David Williams (M.B.), Wales.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following candidates have passed the Final Examination :—

W. H. Anderson, M. Brick, A. Callaghan, C. R. Chichester, J. Crumley, H. C. Falkner, G. A. Fleming, A. A. Hargrave, R. H. Hayden, M. C. Jordan, F. A. Madden, P. F. Monaghan, A. C. McCutcheon, W. H. Parr, C. M. Richards, Jas. Robinson, F. Warren, S. W. Wilson, T. F. Wyse.

Passed Medicine Group.—**A. Banks, J. W. Burne, J. J. Callanan, T. C. Cummins, W. H. Langley, F. W. Perry, J. J. Rogers, A. H. White.**

Passed Surgery Group.—**A. Banks, T. C. Cummins, J. V. Griffin, W. H. Langley, E. C. Murphy, J. B. O'Brien, F. W. Perry, R. R. Smith, J. A. Smullan, W. A. Wills.**

Passed Midwifery Group.—**J. W. Burne, F. C. Bushman, C. E. Cowan, J. V. Griffin, C. A. Hagman, E. C. Murphy, H. J. McCormick, J. T. O'Brien, F. J. Rogers, and R. R. Smith.**

The following candidates have passed the Preliminary Examination :—

W. E. Beamish. C. J. Buchanan, J. Campbell, B. J. Connellan, R. L. Davies, M. J. Dillon, D. J Farrell, S. L. Glynn, D. P. Holland, P. J. Horkan, M. J. Hynes, J. W. Langstaff, J. J. O'Brien, E. E. Roberts, T. J. White, and R. N. Woodley.

Physics only.—**C. W. Caldwell, F. C. Fowler, A. McMunn, P. M. Skipworth. and F. Stoker.**

MATER MISERICORDIÆ HOSPITAL, DUBLIN.—The following appointments have been made :—House Physician : J. O'Donnell. House Surgeon : J. Redington.

THE GENERAL PRACTITIONERS' ALLIANCE.—A meeting of the Council of this Society was held at the offices, 11, Adam-street, Strand, on Wednesday, Nov. 2nd. Dr. Hugh Woods reported that the committee appointed to consider the matter were of the unanimous opinion that it was desirable, before undertaking any financial business for the members, such as the collection of debts &c., to register the Alliance as a limited liability company. It was resolved to convene a special meeting of the Council to consider the report.

SMALL-POX is still maintaining its foothold in the West Riding of Yorkshire, although it seems to have left the districts in which it first appeared some eighteen months ago and to have spread to fresh fields. It has now, we regret to learn, broken out at Otley in Wharfedale.

A PROFESSOR CHARGED WITH FORGING DIPLOMAS.—At Bow-street, on Tuesday, Ludwig Ganting, professor of languages and music, was brought before Mr. Vaughan for extradition, charged on remand with having stolen the seals and forged the diplomas of the University of Berne. Mr. Crawshaw defended. Detective-sergeant Wegner stated that since the last remand he had searched the prisoner's effects and found three seals—one of the Berne University, one of the medical faculty and one of the philosophical faculty. He also found a press used for affixing seals. Among other things he found a number of diplomas. One of them bore seals which appeared to have been impressed by the moulds in the prisoner's possession. It was signed by Studer, rector, and by a professor. The witness added that he found a number of letters addressed to the prisoner from all parts of the country. It appeared from these that he had been in communication with medical gentlemen, and had offered to let them have diplomas for a consideration. Some of the letters were in German, but most of them were in English. Mr. Vaughan, who examined one of the diplomas and said it appeared to be genuine, remanded the prisoner.

FOOTBALL CASUALTIES.—In a match at Fir-grove, on the 29th ult., between the teams representing Farnham and New Town, Aldershot, one of the visiting forwards collided with an opposing half-back and seriously injured his arm.—On the same day, during a match between Dereham and Fakenham teams, the Dereham ground keeper fractured one of his legs just below the knee.—On Saturday, in a game with the Handsworth team, a player fractured his clavicle and was admitted to the district hospital, and a youth in a school match in Dartmouth Park collided with another player, fracturing his arm, and was also admitted to the district hospital.—On the same day, during a game between the Rudge United and Hinckley Trinity teams at Coventry, a forward of the home team fractured his clavicle.—On the 1st inst., during a match between the Farsley Tradesmen and the team of the Duke of Wellington's Regiment, now stationed at Bradford Moor, a player fractured one of his ribs.—On Monday, in a county match at Camborne, a Redruth player fractured his clavicle.—On Tuesday, during the progress of a match at Gosport between the Royal Marine Light Infantry and the Oxfordshire Light Infantry, a player "broke his ankle."

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED: SOUTH-WEST LONDON DIVISION.—The first meeting of the members of the South-West London Division was held (by permission of Dr. Keen) at 211, King's-road, Chelsea, on Nov. 9th. Dr. Matthew Baines was elected to the chair. The chairman then called upon Dr. George Mead to explain the constitution and motives of the London and Counties Medical Protection Society, Limited. Dr. George Mead, having briefly sketched the history of the Society, its aims and administration, replied to various questions asked by the members present. It was then proposed by Dr. Keen, and seconded by Dr. McCaskie, that "The South-west London Division of the London and Counties Medical Protection Society, Limited, be hereby constituted." This was carried unanimously. The following officers of the division were then duly elected :—President : Matthew Baines, M.D.Lond., M.R.C.S., South Kensington. Vice-Presidents : Norman McCaskie, M.D., C.M., South Kensington; William Keen, M.D., M.R.C.S., Chelsea; C. H. Gage-Brown, M.D., M.R.C.S., Chelsea; E. Seton Pattison, L.R.C.P., M.R.C.S., Fulham. Members of Council : George Coates, M.A., M.D., M.R.C.S., and H. D. Waugh, M.D., B.Sc., M.R.C.S., South Kensington; J. Foster Palmer, L.R.C.P., M.R.C.S., Chelsea; H. Des Vœux, M.D., M.R.C.S., Westminster; L. Vernon Jones, M.B., B.Ch., B.A.O., St. James's. Hon. Sec.: Alex. G. R. Foulerton, L.R.C.P., M.R.C.S., D.P.H.Camb., 122, Brompton-road, S.W. It was decided that the Council should have power to add to their number two vice-presidents and six additional members of Council. Votes of thanks to Drs. Matthew Baines, Mead and Keen having been passed unanimously and duly acknowledged, the meeting then terminated.

ST. VINCENT'S HOSPITAL, DUBLIN.—The following appointments have be made:—Resident Physician: James P. Marnell. Resident Surgeon: James F. Barrett.

JERVIS-STREET HOSPITAL, DUBLIN.—The following prizes have been awarded for the past session:—Senior: Gold Medal, G. Hamilton; Silver Medal, A. McCann. Intermediate: Silver Medal, H. Moffat. Junior: Silver Medal, E. Calligan.

THE GRESHAM UNIVERSITY.—The Rev. Dr. Wace and Professor Gault, representing King's College, and Professor Hudson Beere, as a representative of Civil Engineering, gave evidence on Wednesday last before the Gresham University Commission.

UNIVERSITY OF CAMBRIDGE.—The dates for the examinations for medical and surgical degrees for the present Michaelmas term are as follows:—First examination—Part I.: Dec. 6th, 7th, 8th and 9th; Part II.: Dec. 7th and 12th. Second examination—Part I.: Dec. 12th, 13th and 14th; Part II.: Dec. 6th, 7th, 8th, 9th, 10th and 12th.

AT the monthly meeting of the Royal Institution of Great Britain on Monday last the special thanks of the members were returned to the Goldsmiths' Company for their generous grant of £1000 "for the continuation and development of the valuable original research which the Society is engaged in carrying on; and especially for the prosecution of investigations on the properties of matter at temperatures approaching that of the zero of absolute temperature."

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, E. W., M.R.C.S., L.R.C.P., has been appointed House Accoucheur to King's College Hospital.

ADAMS, W. F., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

ARNISON, W. C., M.D. Durh., M.R.C.S., has been reappointed Honorary Surgeon to the Newcastle-on-Tyne Royal Infirmary.

BLACK, W. G., F.R.C.S. Edin., has been appointed Honorary Assistant Surgeon to the Royal Infirmary, Newcastle-on-Tyne, vice Dodd, resigned.

BOND, C. HUBERT, M.B., C.M. Edin., M.P.C., has been appointed Resident Clinical Assistant to the West Riding Asylum, Wakefield.

BOTHWELL, G. GRANVILLE, M.B., C.M. Aberd., has been appointed Assistant House Surgeon to the Royal Surrey County Hospital, Guildford, vice Walker, resigned.

CLARKE, J. JACKSON, M.B. Lond., F.R.C.S., has been appointed Assistant Surgeon to the North-west London Hospital, Kentish Town-road.

DENT, LOUIS W., L.R.C.P. Lond., M.R.C.S., has been appointed Deputy Medical Officer, Ewell.

DUFF, W. W., M.D., B.Ch. Irel., has been appointed Medical Officer for Aghalee, Lurgan Union, vice Scott, resigned.

FREELAND, REGINALD STILWELL, M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Resident Medical Officer to the Pay Wards, Guy's Hospital.

FOOT, E. G., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Petworth Union, vice Rutherford, resigned,

HAYCOCK, H. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Thirteenth Sanitary District of the Basford Union.

HAYES, W. A., M.R.C.S., L.R.C.P. Lond., has been appointed Poor-law Medical Officer for the No. 2 Division of the Calne Union.

HIGGENS, O. E., M.A., M.B., M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Hastings and St. Leonards Provident Dispensary.

JACKSON, A. C., M.R.C.S., L.R.C.P. Edin., L.M. Lond., L.M. Edin., has been appointed Medical Officer to the Princess Christian Cottage Hospital at Sierra Leone.

JAGER, H. I., L.R.C.S., L.R.C.P., has been appointed Ophthalmic Clinical Assistant to King's College Hospital.

LEGGATT, G. S., M.R.C.S., has been appointed Medical Officer for the Out-door Poor and the Workhouse of the Hoo Union.

MACKENZIE, JOHN CUMMING, M.B. &c., Deputy Medical Superintendent of the Northumberland County Asylum, Morpeth, has been appointed Medical Superintendent of the Northern Counties Asylum, Inverness, vice Aitken, deceased.

MARTIN, T. BERKELEY, L.R.C.P., L.R.C.S., L.S.A., has been appointed Medical Officer for the Bishop Wearmouth West District of the Sunderland Union, vice Burns, resigned.

MONAGHAN, T. JOS., L.R.C.P., L.R.C.S. Edin., D.P.H., has been appointed Medical Officer to the Accrington Town Council.

MORTON, EDWIN, M.D., C.M. Edin., has been reappointed Medical Officer of Health for Redditch.

OLDMAN, C. E., M.D. Camb., M.R.C.S., has been appointed Medical Officer of Health to the Godstone Rural Sanitary District.

PARTINGTON, WM., M.B., M.S. Glasg., has been appointed Medical Officer of Health for the Tunstall Urban Sanitary District.

PERRY, S. HERBERT, M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

PHILLIPS, E. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First Western Sanitary District of the Billesdon Union.

POCKLINGTON, E., M.R.C.S., has been reappointed Medical Officer of Health for Wimbledon.

PRICHARD, RICHD., M.D., M.S. Glasg., has been reappointed Medical Officer of Health for the Cardiff Rural Sanitary District.

PRITCHARD, E. L., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

SANDERSON, CHARLES, L.R.C.P. Edin., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for Hastings.

SANDFORD, H. V., L.R.C.P. Lond., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for the Rural Sanitary Districts of Bromyard, Hereford, Ledbury, Leominster, and Wesbley Unions.

SHORTRIDGE, THOS. W., M.D. Brussels, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health to the Honiton Town Council.

SMITH, T. W., L.S.A., has been appointed Assistant House Accoucheur to King's College Hospital.

SMITH, WM. R., M.B. Lond., M.R.C.S., L.R.C.P., L.S.A., has been appointed House Physician to King's College Hospital.

STEARN, F. C., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Cottage Hospital, Walsall.

WALKER, H. STANLEY, M.B., C.M. Edin., has been appointed House Surgeon to the Dover Hospital and Dispensary.

WARNER, T., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to King's College Hospital.

WICKHAM, H. T., M.B., M.S. Edin., has been appointed Medical Officer for the No. 2 Sanitary District of the Newport Pagnell Union.

WILLIAMSON, A. S., M.B., M.S. Aberd., has been appointed Medical Officer of Health to the Sandal Local Board.

WILSON, A. C. I., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health to the Thurlstone Local Board.

WYNNE, W. A. S., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health to the Lowerstoft Urban and Port Sanitary Authority.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CANCER HOSPITAL (Free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Board and residence, and allowance for washing provided. (Applications to the Secretary, 24, Finsbury-circus, E.C.)

EAST LONDON HOSPITAL FOR CHILDREN, Glamis-road, Shadwell, E.—House Physician. Board and lodging provided.

GENERAL HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester.—Junior Resident Medical Officer for one year. Salary £30 per annum, with board and lodging.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistant in the Out-patient department.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Assistant Physician

NORTHERN INFIRMARY, Inverness.—House Surgeon and Dispenser. Salary £70, with board &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiner.

SHEFFIELD GENERAL INFIRMARY.—House Surgeon for three years. Salary £120 per year, with board, lodgings, and washing, with a prospective advance of £10 per year for the second and third years.

SHEFFIELD GENERAL INFIRMARY.—Assistant House Surgeon for three years. Salary £80 per annum, with board, lodging and washing.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months. Board and lodging provided.

ST. MUNGO'S COLLEGE, Glasgow.—Chair of Anatomy.

STRAND DISTRICT OF THE COUNTY OF LONDON.—Medical Officer of Health for this District. Salary £400 a year.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board and lodging provided.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Surgeon for six months. Board and lodging provided.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon. Terms £60 per annum, with rooms, board and washing.

Births, Marriages and Deaths.

BIRTHS.

BRETT.—On Sept. 24th, at Melbourne, Australia, the wife of J. Talbot Brett, L.R.C.P.I., M.R.C.S.E., of a daughter.

GIMBLETT.—On Nov. 6th, at Pembury-road, Clapton, N.E., the wife of W. H. Gimblett, L.R.C.P., of a daughter.

HARRIES.—On Oct. 30th, at Grosvenor House, Aberystwith, the Dr. T. D. Harries, M.R.C.P. Lond., F.R.C.S., of a son.

NICHOLS.—On Oct. 5th, at Secunderabad, India, the wife of Surgeon-Captain F. P. Nichols, M.B. Cantab., Army Medical Staff, of a son.

SCOTT.—On Nov. 5th, at Fitzwilliam-square, Dublin, the wife of J. Harrison Scott, F.R.C.S.I., of a daughter.

SCOTT.—On Nov. 1st, at Circus, Bath, the wife of Richard J. H. Scott, F.R.C.S., of a son.

WADE.—On Nov. 2nd, at Moira-place, Southampton, the wife of A. B. Wade, Esq., M.B., of a daughter.

WOODCOCK.—On Nov. 8th, at Springfield Hall, Wigan, the residence of her father, Wm. Trevor Wauklyn, the wife of the late R. Fraser Woodcock, L.R.C.P., M.R.C.S., of a daughter.

MARRIAGES.

BENSON—GABRIEL.—On Oct. 25th at St. Augustine's Church, Kilburn, Henry P. D'Arcy Benson, M.B., Ch.M., eldest son of the late Dr. J. R. Benson, of Queensland, Australia, to Mary Louisa Gabriel, daughter of the late John Gabriel, of Calne, Wilts.

COLLYNS—ABBOT.—On Oct. 19th, at the parish church of Abbot's Leigh, Robert John Collyns, L.R.C.P. and M.R.C.S., of Dulverton, to Eleanor Maud, youngest daughter of the late Henry Abbot, Esq., of The Priory, Abbot's Leigh, Bristol.

COWLEY—FULLER.—On Nov. 8th, at the Parish Church, Sutton, Surrey, John Selwyn Cowley, M.R.C.S., of Upton-on-Severn, to Lilian Fuller Fuller, younger daughter of the late Charles Fuller, of Halifax.

DICKINSON—EVENS.—On Nov. 3rd, at Holy Trinity Church, Sloane-street, Thomas Vincent Dickinson, M.D. Lond., eldest son of Thomas Dickinson, Esq., of Sloane-street, to Beatrice Frances Arscott, youngest daughter of Captain Evens, late Royal Fusiliers, of Auber House, Clapham.

GEMMEL—THOMSON.—On Nov. 3rd, at Blenheim Church, Kelvinside, Glasgow, Dr. Burns Gemmel, Liverpool, to Margaret Alice, eldest daughter of the late Dr. William Cooper Thomson, Glasgow.

JONES—EVANS.—On Nov. 2nd, at the Parish Church, Dowlais, by the Rev. W. R. Thomas M.A. (Oxon.), Vicar of Abersychan, assisted by the Rev. Ll. M. Williams, Rector of Dowlais, Samuel Cromwell Jones, M.D., B.S. (Lond.), of Merthyr, to Elizabeth Gwenllian, eldest daughter of John Evans, Esq., Isoed, Merthyr.

KITSON—BURNSIDE.—On Nov. 5th, at St. Mary's Church, Beaminster, Dorset, Francis Parsons Kitson, M.R.C.S. and L.R.C.P. Lond., youngest son of the late Edward Bellamy Kitson, Esq., of The Lodge, Beaminster, to Beatrice Maud, youngest daughter of the late Col. Henry Edwd. Hillman Burnside, C.B., of Beaminster, Dorset.

ROGERS—CHURCHILL.—On Nov. 7th, at Bombay, Surgeon-Captain Frederick Arthur Rogers, D.S.O., Bengal Medical Service, son of the late Moses Rogers, Deputy-Inspector-General of Hospitals, Madras, to Janet Felicia, third daughter of John Churchill, of Wimbledon, Surrey.

DEATHS.

CHRISTIE.—Nov. 4th, fallen asleep in Jesus, at Ash House, Broadgreen, aged 80 years, Thomas William Christie, B.A. Camb., M.R.C.S. Eng., for the past forty years a faithful preacher of the "Faith of God's Elect." "Happy art thou, O Israel. Who is like unto thee, O people saved by the Lord." Funeral at St. James's Cemetery, Tuesday, at noon.

LEAK.—On Nov. 4th, at his residence, Lawn Cottage, Over, Cheshire, Alexander Piozzi Leak, M.D. Aberdeen, aged 77.

MILLER.—On Oct. 28th, at Glasgow, Hugh Miller, M.D., C.M. Glasg., late of Hamilton-square, Birkenhead.

PITTS.—On Nov. 9th, at Copt Hall, Springfield, Chelmsford, Robert Zacchæus Pitts, M.R.C.S., aged 42.

STEELE.—On Nov. 6th, at Guy's Hospital, John Charles Steele, M.D., Medical Superintendent, aged 71.

THOMSON.—On Oct. 30th, at Round-hill crescent, Brighton, James Archer Thomson, M.B., M.S., in his 49th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 10th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo	Maximum Temp. in Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Nov. 4	29·89	S.	53	52	83	59	47	·01	Overcast
,, 5	29·89	S.W.	55	54	61	58	48	·11	Overcast
,, 6	29·89	W.	51	50	62	55	48	·20	Raining
,, 7	30·15	S.W.	39	39	58	51	38	·05	Foggy
,, 8	30·34	S.W.	38	38	48	47	37	·01	Foggy
,, 9	30·23	S.E.	42	41	54	52	38	..	Overcast
,, 10	30·17	S.E.	47	47	51	49	42	..	Foggy

Medical Diary for the ensuing Week.

Monday, November 14.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital: 1 P.M., Mr. R. Marcus Gunn: Affections of the Crystalline Lens.—101, Gt. Russell-st.: 8 P.M., Dr. Galloway: Genito-urinary Tract.—**Parkes Museum (Margaret-st., W.):** 4 P.M., Dr. L. C. Parkes: Hospitals.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Dr. R. Norris Wolfenden: Laryngeal Neuroses.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. The President: Specimen of Old Dislocation of Ankle.—Dr. Percy Kidd: Tubercular Ulceration of Pharynx successfully treated by Lactic Acid.—Mr. Goodsall: (1) Left Inguinal Colotomy for Pelvic Tumour; (2) Left Inguinal Colotomy, with subsequent Removal of part of the Rectum with the Growth, in a Man aged seventy.—Dr. Hadden: Urticaria Pigmentosa.—Mr. Hurry Fenwick: "Caisson" Work in Bladder Surgery.—Mr. Lockwood: Radical Cure of Hernia.—Mr. Turner: Bony Tumour of Pelvis associated with Rheumatoid Arthritis of the Hip.—Dr. Abraham: (1) Leprosy improving under Treatment; (2) Two cases of Skin Disease.—Dr. Herschell: Pulsatile Tumour of the Neck.—Mr. Sheild: (1) Cystic Tumour of the Auricle; (2) Early case of Raynaud's Disease.

Tuesday, November 15.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Dr. Payne: Eczema, its Treatment.—**Bethlem Hospital:** 2 P.M., Dr. Theo. Hyslop: General Paralysis of the Insane.—101, Gt. Russell-st.: 8 P.M., Dr. Herman: Treatment of Bleeding Fibroids.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Special General Meeting to consider proposed alterations in By-laws. Ordinary Meeting. Dr. Sherrington: Colour Granules in Cells in Cholera &c.—Mr. J. Jackson Clarke: (1) Epitheliomata on the Legs of a Hen; (2) Genito-urinary Organs of a pseudo-Hermaphrodite, with Capillary Urethra and Symmetrically Sacculated Bladder.—Mr. C. F. Beadles: Fibroma of the Male Breast. Card Specimen by Dr. E. C. Perry.

Wednesday, November 16.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. M. Bruce: Aneurysm of the Aorta.—**Royal London Ophthalmic Hospital:** 8 P.M., Mr. A. S. Morton: Retinal Affections.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Dr. Greville MacDonald: Laryngitis Acute and Chronic.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. F. Chapman: Foraminifera of the Gault of Folkestone.—Mr. C. Haughton Gill: Fungoid Growths on Diatoms.—Mr. John Hood: Notops Ruber, a New Rotifer.

Thursday, November 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-street: 4 P.M., Dr. M. Lubbock: Bronchitis in Children.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Gowers: Cases in the Hospital.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. Woakes: Some Nasal Neuroses.—Central London Sick Asylum, Cleveland-st., W.: 5.30 P.M., Mr. Timothy Holmes: Surgical Cases in the Wards.

HARVEIAN SOCIETY.—8.30 P.M. Dr. Rayner Batten will exhibit and explain a new Clinical Pulse Manometer.—Mr. Buckston Browne: The Treatment of Impassable Stricture of the Urethra.—Dr. Charles Gross: Some Obscure Head Injuries.

NEUROLOGICAL SOCIETY OF LONDON (20, Hanover-sq.).—8.30 P.M. Dr. Head: The Distribution of Sensory Disturbances, with especial reference to the Pain of Visceral Disease.

Friday, November 18.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. M. Bruce: The Prognosis of Heart Disease.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Professor Crookshank: Leprosy and Glanders (Sections).

Saturday, November 19.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. H. Corner: General Paralysis of the Insane.

Notes, Short Comments & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

MEDICAL AID ASSOCIATIONS.

WE have received a very large amount of additional correspondence on the subject of Medical Aid Associations, which by reason of the great pressure on our space this week we are reluctantly obliged to hold over for future consideration.

Surgeon-Captain.—We do not know any authority for the statement and we question if it be true.

Dr. J. B. Ball.—The paper will be inserted as soon as possible.

"RELIGION v. CHARITY."

To the Editors of THE LANCET.

SIRS,—I think you are unjust to the Corporation of Dublin in your annotation headed as above. The corporation has not refused a grant to the Rotunda Hospital because there was not a majority of Roman Catholics on the board of the hospital, but because the authorities of the hospital systematically exclude Catholics from all the paid appointments and refuse adequate representation to Catholics on the board, though the vast majority of patients belong to that religion. It is also incorrect to say that the corporation gives grants to purely Catholic hospitals, like the Mater and St. Vincent's and refuses them to Protestant ones, such as the Adelaide. The latter is a purely sectarian institution, admitting no patients but Protestants. It is true the Mater and St. Vincent's, are under Catholic management, but both admit freely patients of all denominations, and both from time to time have had Protestants on the staff and among the resident pupils. The Meath and City of Dublin Hospitals are as Protestant as the Mater and St. Vincent's are Catholic, and still receive grants from the Corporation. The injustice of this charge of bigotry against the Dublin Corporation will seem more evident when we remember the fact that it has just unanimously elected a Protestant to the office of Lord Mayor for the ensuing year, and that it pays considerably more than half its salaries to Protestant officers. If there is bigotry in the matter, it is certainly not on the side of the Corporation. Hoping you will insert this in justice to that much-maligned body,—I am, Sirs, yours truly,

November, 1892. L.M. ROTUNDA.

NOTIFICATION OF SCARLET FEVER.

F. Hallucis (Leicester) asks:—

"Is it legal for the sanitary authority to decline to pay the fee for notification under the following circumstances?—B. sends a certificate that a child is suffering from scarlatina, and the patient is sent to the fever hospital and diagnosed by the medical officer of health as a case of measles and sent home. In a few days this patient is readmitted in a state of peeling, along with another child from the same house suffering from scarlet fever. B. was told that he would not receive a fee for the first certificate, but as a second case had happened he would be paid for the latter, which, he was informed, would come to the same thing, as only one certificate is required from the same house. You will see that if a second case had not occurred B. would not have received a fee at all. Is it not sufficient that the certificate should be to the best of his knowledge and belief?"

*** Notification in Leicester is not under the General Statute of 1889, and we have not the Leicester Corporation Act of 1879 before us; but if there be in that Act a limitation to the effect that second cases in the same house need not be notified it is obvious that the fee in this case is due for the first, not the second, case reported. But the instance goes to show that the advice given by the Local Government Board to the effect that fees should not be withheld on the ground of assumed faulty diagnosis, and only when distinct *mala fides* is in question, is the right one.—ED. L.

Medical Witness.—1. The operation ought not to have been performed. 2. The father could have sued. In the absence of the parents or guardians the surgeon *assumes full* responsibility. In their presence he cannot *usurp* it.

M.D.—St. Andrews or Durham, probably the former.

A GROWING EVIL.

To the Editors of THE LANCET.

SIRS,—Among the various annoyances which beset the medical man that caused by impostors who mimic the science of medicine and surgery is by no means the least. Is it not preposterous that this country is the only one in Europe where any rogue may put up a brass plate and advertise to all the world that he sees patients between such-and-such hours daily, and that he alone has a sovereign remedy for every complaint under the sun? I do not advocate that the law should be carried to the extreme that we find it to be the case in France and Switzerland, but I am sure both the profession and the public would be the gainers if it were made an offence for anyone to receive money for medical advice whose name did not appear on the Medical Register.

Only the other day I was accosted by a man in Indian costume near Madame Tussaud's, who presented me with a flaming handbill announcing that X——, the great Indian doctor, was prepared to cure all kinds of diseases of the eye by means of marvellous Indian herbs. A little further on the same road, towards Euston Station, I noticed the "Ophthalmic Institution," presided over by a man named Pomies, who professes to cure every eye disease, from cataract to glaucoma, by means of "golden ointment" and "drops." Retracing my steps on the same road, I came to Bell-street, Edgware-road, and there I beheld one of my dispensary patients coming out of a public-house rejoicing in the name of "The Green Man." On venturing to ask her what benefit she expected to obtain from the gentleman in green, she informed me that she went there for medicine for her little boy. Further inquiry brought to light the strange fact that the former proprietress of the "alcohol dispensary" had left a sum of money in her will to be expended in eye lotions and drops to be given away to any person suffering from inflamed eye or defective sight, backed up, I suppose, by copious libations of beer and spirits, which were not included in the free bill of fare.

Now, Sirs, I ask you, Is it right that poor and ignorant women and children should be allowed to be ensnared into these pitfalls, so that their diseases, which in proper hands could be nipped in the bud, should be permitted to reach a stage beyond the skill of science? We cannot hope that the public should have discernment enough to see from *a priori* considerations why the professor in the Euston-road must only lead to disappointment by promising to clear a cataractous lens by means of eye lotions and electric currents. We cannot hope to convince the patrons of "The Green Man" that the gentleman behind the bar who dispenses alcohols of various strengths in media of many hues should not be the most suitable person in the world to treat an incipient glaucoma by means of drops and lotions; but what I do hold is that the public should be protected from such snares, especially that every square mile in London contains at least one free hospital or dispensary conducted on rational principles. Years ago the present Prime Minister declared that the object of all legislation was to make it easy for men to do right and difficult for them to do wrong, and surely it is only another way of stating Lord Beaconsfield's celebrated paraphrase of the preacher, "Sanitas sanitatis omnia sanitas," by saying the object of legislation is to make it easy for men to keep well and difficult for them to get ill. May I urge, Sirs, that the time is more than ripe when Parliament should interfere to protect our rights as well as the public from imposture?

I am, Sirs, yours truly,

G. LINDSAY JOHNSON, M.D., F.R.C.S.

Stratford place, W., Nov. 1st, 1892.

RETROGRADE PHYSIOLOGY.

DR. F. JEZEK of Berlin is a bold man. He claims to have proved that the great physiological tenet incontestably, as we have all thought, demonstrated by William Harvey is untrue. In a monograph which leaves little to be desired in the way of typography and paper he demolishes—to his own satisfaction—the doctrine of the circulation of the blood with the heart as its central motive power. The title of this revolutionary *brochure* is pithy and suggestive. It runs: "Umsturz der Harvey's chen Lehre vom Blutkreislaufe und Erklärung der Natürlichen Blutbourgung." (Leipsic: P. Hobbing. 1892.) Dr. Jezek's plan of campaign against the physiological stronghold opens with a refutation (?) of the statement that when large arteries are occluded the circulation is carried on by collateral channels. At any rate, in one dog in which he ligatured the brachial, femoral, and carotid arteries on both sides, and in another, the abdominal aorta, without more than temporary disturbance, he failed to find by injection and dissection, two months subsequently, any enlargement of collateral vessels. He next proceeds to examine the condition of the heart during life by means of direct palpation, and declares that he could detect no periodical change of volume (diastole and systole). Next he compares the blood pressure in heart and vessels with the pressure of the air in the lungs, and exhibits synchronic tracings to prove that the intra-vascular and intra-pulmonary pressure correspond with regularity, the periods of minimal and maximal pressure coinciding in each. He claims also by the same method to show that the ventricular pressure corresponds with the auricular, and both with the arterial and venous. These results traverse in a singular manner those of most observers, although Dr. Jezek thinks that some are of the same opinion as himself. Of course he does not ignore the minor variations of intra-cardial pressure that occur between the respiratory waves and which, according to him, by no means correspond with the systole. Well may he claim, if his inference were only true, that such a conclusion is opposed to "Harvey's theory." Next he dismisses the notion that the heart acts like a pump by reference to the phenomena of double heart beat and of the pulsus bigeminus; and he maintains that the cardiac contractions are not due to stimulation of the ganglia alone, but to direct stimulation of muscle fibres, the contraction of which is not sufficient to exert any notable influence on the change of the heart's volume. He further cites malformations of the heart—such as single auricles, aorta springing from both ventricles, absence of pulmonary arteries—as evidence against the ordinary acceptation of the cardiac action. What, then, does he substitute for this iconoclastic destruction of prevailing doctrine? Briefly put, his theory is that the condition of the lung during inspiration and expiration respectively causes an alternating diminution and increase of the calibre of the pulmonary vessels, so that the blood is pressed into the left side of the heart and the systemic arteries from the air-distended lung. Simultaneously there is a rise in pressure on the venous side, which causes the blood to flow into the lungs as they shrink during expiration. All this is so exactly contrary to known facts of the influence of respiration on the venous circulation that it is difficult to see how it can be seriously held, as it is by Dr. Jezek, who furnishes several diagrams, cleverly devised, to support his views of the main factor in the circulation being the changes in the form of the lungs. Nay, he discards the term "circulation" altogether, and considers that the blood simply flows backwards and forwards, according as it is drawn into or pressed out of the lungs. We are fain to rub our eyes and marvel whether we are not living in the days of Galen, at teaching so primitive, which he manages to fit into a theory of the pulse and of the impulse of the heart in a way that is even more singular. In his own words, he claims to have proved that the cause of the pulse wave does not depend on the action of the heart, but on the difference in pressure due to the periodical diminution and increase of the diameter of vessels; and that the heart which does not have the power ascribed to it is merely passively distended and relaxed by the changes in the tension of the blood column. He promises a further contribution on the subject with respect to digestion, but we frankly confess to a doubt whether anyone will take the trouble to refute his refutation of a well-established doctrine.

Antiquarian.—Our correspondent justly resents having it said that he "covers" an unqualified assistant in a dispensary connected with which handbills are issued. He attributes this erroneous statement to medical men. We hope he is wrong here. At any rate, we fully accept this disclaimer, and we do not see that he need make it in the newspapers. Let him trace the error to its source and demand its contradiction.

L.—The card should be enclosed. The information is of an essentially private and professional character.

TREATMENT OF DIPHTHERIA.

Dr. Emanuel May writes advocating the early and thorough application by the brush to the affected parts of the throat in diphtheria of liq. hydrarg. perchloridi, or strong solution of argent nit. (xl to ℥i)., or the tinct. ferri perchloridi. He has found that many object to such applications, preferring sprays of boracic acid or similar mild measures, which he much deprecates.

M.R.C.S., L.R.C.P.—Similar cases of acute orchitis following influenza are to be found in our columns—viz., Jan. 2nd, 1892 (p. 22), by Mr. J. W. Harris; Jan. 23rd, 1892 (p. 193), by Mr. J. E. Briscoe; Feb. 13th, 1892 (p. 359), by Dr. Gordon Kelly. In the report of the Berlin Society's Committee it is stated that there were records of twenty-five cases of epididymitis and orchitis given in 3185 returns.

Mr. C. French Hensley (Broadway).—Our correspondent thinks that such expressions as "infamous Vaccination Acts," "greatest fools," "filthy dogma" and "revolting quackery" are useful as arguments against compulsory vaccination. These terms are not dignified, reasonable or true. In other portions of his communication the language is hardly courteous.

Lieut.-Colonel Donegan.—We are acquainted with no institution in Great Britain or Ireland which admits male and female students to all the classes included in a medical curriculum.

Fvirplay has not enclosed his card.

A COMPLAINT.

To the Editors of THE LANCET.

SIRS,—I shall feel obliged by your finding space for the following—viz.: In March, 1889, Messrs. —— and Co. sent instruments to Winton for display. I selected some and paid for them in full, five days later, taking note of the items on counterfoil of cheque. Some time afterwards applications for payment and threats of legal proceedings began to pour in, notwithstanding that I wrote on three occasions asking for items, saying I had paid, and requesting the annoyance might cease. Finally, this month, a summons to the London City Court was thrust into my hand in the street. I at once gave "notice of intention to defend," asked again for particulars, and was at last vouchsafed this: "'89, Apl. 24th, To goods [*sic*], 33*s.* 6*d.* '89, Apl. 29th. Cr. by returns [*sic*], 22*s.*" (N.B.—My cheque and *their receipt* was for 31*s.* in March!); and ten days before the time fixed for hearing the action I received notice from Messrs. ——'s solicitor that "all further proceedings in this action are wholly abandoned." Not a word of apology or regret from the firm for subjecting me to this most groundless and vexatious action!

I am, Sirs, yours faithfully,
W. MORTON HARMAN, B.A., M.D., F.R.C.S.I.

Christchurch-road, Winchester, Oct. 31st, 1892.

"EFFICIENT VACCINATION."

To the Editors of THE LANCET.

SIRS,—I can fully endorse the statements made by "Public Vaccinator" as to the inefficient manner in which the operation of vaccination is performed by a great majority of private practitioners. In my district the operation is not only inefficiently performed, but a certain practitioner and his assistant, after making themselves acquainted with the births that have taken place, are actually in the habit of vaccinating all children of the poorer classes gratis, apparently for the express purpose of preventing them being taken to the public vaccinator, where the operation is performed *secundum artem* and under Government supervision. Until some standard of efficiency is strictly demanded from all practitioners alike the beneficent discovery of Jenner is likely to fall more and more into disrepute.

I am, Sirs, yours faithfully,
October, 1892. ANOTHER PUBLIC VACCINATOR.

"THE HISTORY OF QUACKS AND QUACKERY."

To the Editors of THE LANCET.

SIRS,—Referring to the statement in "Chambers's Etymological Dictionary" (quoted by your correspondent, Dr. Leonard Kidd) that the word "quack" is derived from the cry of the duck, it is a curious fact that the Egyptian hieroglyphic for a doctor is a duck.

I am, Sirs, yours obediently,
Nov. 7th, 1892. R. M.

INTRA-THORACIC AUSCULTATION.

To the Editors of THE LANCET.

SIRS,—I think a reference to the "Medical Digest," Section 833: 3, will show that the method so graphically described by Dr. Richardson at page 1037 was somewhat similarly described by Bianchi in 1888 and Giorgeri in 1889. The concluding sentence of Giorgeri's paper runs thus: "He believed that endo-auscultation may prove of great service in the study of diseases of the stomach and œsophagus, and possibly of the circulatory system in the thorax."

I am, Sirs, yours truly,
Boundary-rd., N.W., Nov. 9th, 1892. RICHARD NEALE, M.D. Lond.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—

A.—Messrs. Allen and Hanburys, London; Mr. W. Innes Addison, Glasgow; Alpha, London; Albion Soap Co.; Anxious; Antiquarian.

B.—Dr. Robt. Boxall, London; Mr. Thos. Bernheim, London; Dr. Bond, London; Mr. Botwood, Ipswich; Mr. Bruorton, South Norwood; Messrs. Benson and Co., Wigan: Mr. Burke, Wolverhampton; Mr. Bush, Weymouth; Mr. Bentley, Whitehouse; Mr. Bellaers, Leicester.

C.—Prof. W. W. Cheyne, London; Dr. W. S. Colman, London; Dr. Harry Campbell, London; Mr. E. Clochnitts, Ingateston; Messrs. Crossley, Moir, and Co., London; Mr. Cornish, London; Carriage Insurance Co, London; Cortland Carriage Works, London

D.—Dr. E. Davies, Wrexham; Mr. Ed. Duke, St. Leonards; Lieut.-Col. J. H. Donegan, Cork; Mr. Duncan, Salop

E.—Dr. George Elder, Nottingham; Ebor, London.

F.—Mr. Fegan, Brandon; F.R.C.S.E.

G.—Dr. Gee, London; Dr. Wm. Griffith, Denbigh; Mr. Griffiths, Bristol; Messrs. Gordon and Gotch, London.

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N.—Northern Infirmary, Inverness.

O.—Mr. Oliver, Manchester; Mr. Ormsby, Runcorn.

P.—Dr. Leslie Phillips, Birmingham; Dr. A Young, Manchester; Messrs. Parkins and Gotto, London; Mr. Pentland, Edinburgh; Principal.

R.—Dr. D. Riordan; Dr. Leonard Renfry, London; Dr. Russell, Edinburgh; Dr. J. J. Ridge, Enfield; Mr. J. Ryan, Colchester; Mr. Rodgers, London.

S.—Dr. G. A. Sutherland, London; Mr. E. C. Smite; Dr. Heywood Smith, London; Mr. Graham Steell, Manchester; Dr. W. R. Smith, London; Dr. Sullivan, Dublin; Mr. Shepherd, London; Mr. H. Seville, London; Mr. T. Smith, London; Messrs. Slinger and Son, York; Dr. Sanctuary, London; Mr. Surndells, Barking.

T.—Dr. W. Tyson, Folkestone; Mr. Lawson Tait, Birmingham; Mr. F. Treves, London.

W.—Dr. A. G. Welsford, Cambs.; Dr. J. Woodhead, Worcester; Mr. R. Weaver, Holborn; Mr. Williamson, Liverpool; Messrs. Walker and Co., Heckmondwike; Messrs. White, Druce, and Brown, London; Messrs. Wyleys, Coventry; West Bromwich District Hospital.

Z.—Zygoma, London.

LETTERS, EACH WITH ENCLOSURE, are also acknowledged from—

A.—Mr. Anderson, Carmarthen; Mr. Allen, Kilburn; Anglo-Swiss Condensed Milk Co., London; African, London.

B.—Mr. Breach, Newbury; Messrs. Beaman and Street, Haydock Lodge Retreat; Messrs. Bell and Co., Lancaster; Messrs. Baxter and Co., Norwich; Mr. Blatchley, London; Messrs. Beale, Battersea; Mr. Beaman, Huntingdon; Messrs. Blount and Co., London; Mr. Baker, Hindley; Bacillus, London; B. V. M., London.

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K.—Mr. Kilman, Chatham; Mr. Keith, London; Mr. Kingsley, Cambridge.

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N.—Mr. Norman, Teignmouth; Mr. Nicholson, Hereford.

O.—Omega, London.

P.—Dr. Pearson, Piccadilly; Mr. Price, Longton; Messrs. Pawson and Brailsford, Sheffield; Dr. Primrose, Darlington; Princeps, London; Physician, London.

R.—Dr. Robinson, Durham; Mr. Renfry, Hyde-park; Messrs. Roe and Co., Salisbury; Messrs. Riddle and Co., London; Mr. Robinson, Durham; Messrs. Rumsey and Co., Twickenham; Mr. Rankin, Kilsyth.

S.—Mr. Stacpoole, London; Canon Scott, Leeds; Messrs. Schweitzer and Co., London; Messrs. Savory and Moore, London; Miss Sprigg, London; Messrs. Somerfield and Co., London; Secretary, Derby Infirmary; St. Andrew's Hospital, Northampton.

T.—Dr. Taylor, Nottingham; Mr. Thin, Edinburgh; Dr. Tonge-Smith, Kettering; Mrs. Tyte, Minchinhampton.

U.—Mr. Ubsdell, South Devon; Union Assurance Society, London.

V.—26, Victoria-road, Hackney Wick.

W.—Dr. Wilson, Blantyre; Mr. C. Wilks, London; Mr. J. Ward, London; Dr. Welch, Nantwich; Dr. Wright, Derby; Messrs. Wall and Sons, Wigan; Dr. Williams, Dowlais; Worcester General Infirmary.

NEWSPAPERS.—*Leicester Daily Post, Le Temps (Paris), Glasgow Herald, Sussex News, Leicester Mercury, Western Daily Mercury, Newcastle Chronicle, Bristol Mercury, Bombay Gazette, Cape Argus, Times of India, Dumfries Courier, Dundee Advertiser, Yorkshire Post, Pioneer Mail, Liverpool Daily Post, Law Journal, Leeds Mercury, Local Government Chronicle, City Press, Windsor and Eton Express, Surrey Advertiser, Scotsman, Sunday Times, Windsor and Eton Gazette, Hertfordshire Mercury, West Middlesex Standard, Reading Mercury, Weekly Free Press and Aberdeen Herald, Evening News (Portsmouth), Insurance Record, Local Government Journal, Mining Journal, Birkenhead and Cheshire Advertiser, Millom News, Gus's Hospital Gazette, Indian Engineering, Dereham and Fakenham Times, Nursing Record, Publisher's Circular, Lynn News, Doncaster Chronicle, Eastern Morning News, Waterford Mirror, Middlesex Chronicle, &c.*, have been received.

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